22

Archeological Investigations of Six Spanish Colonial Period Sites

Barataria Unit, Jean Lafitte National Historical Park and Preserve, Louisiana

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Barataria Unit, Jean Lafitte National Historical Park and Preserve, Louisiana

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ABSTRACT

Work reported in this volume was performed by Earth Search, Inc. in partial fulfillment of Contract No. RFQ7029-8-0029 with the National Park Service, Southwest Region, Santa Fe, New Mexico. A rigorous program of site definition and hand excavation was conducted at six sites discovered by Swanson (1988a) in the Barataria Unit of Jean Lafitte National Historical Park and Preserve to verify that they were the remains of a late eighteenth century Canary Islander settlement. Subsequent to field investigations, three additional potential Canarian sites were located.

Only one of the six sites had been disturbed by plowing, and the remainder were in virtually pristine condition. Artifacts recovered included late eighteenth century French and Anglo-American ceramics, glass, architectural debris, gunflints and flint debitage, smoking pipes, and clothing hardware. In addition, aboriginal ceramics were recovered from four of the sites. These indicate that the settlers were trading with Indians who probably lived somewhere in the Barataria region. A brick structural feature was located on one of the sites, and domestic refuse middens were discovered on two others.

These investigations confirmed that the sites were part of the Canarian settlement. It is recommended that the six sites, 16JE197, 16JE198, 16JE199, 16JE214, 16JE215, and 16JE216 be nominated for inclusion on the National Register of Historic Places.

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Earth Search, Inc., would like to thank the personnel of the National Park Service, Southwest Regional Office and Jean Lafitte National Historical Park and Preserve, for their assistance and encouragement during the course of this project. Mr. David Muth, who facilitated our survey within the Barataria Unit, deserves special mention.

We are particularly grateful for Ms. Betsy Swanson's aid. She generously made her research files available to us, and she supplied the photographs for this report. We would like to thank Mr. Rick Fifield of the Historic District Landmarks Commission for his assistance in interpreting the feature at 16JE214. We should also mention that Mr. Frank Ehret provided us with moral support and cold soft drinks during some unbelievably hot days in the field.

Earth Search extends special thanks to members of our field crew: Mr. Kenneth Jones, Mr. Stuart Speaker, Mr. Christopher von Nagy, and Mr. Michael Comardelle. Finally, the author would like to extend her personal thanks to Dr. Herschel Franks for his assistance, advice, and support throughout this project.

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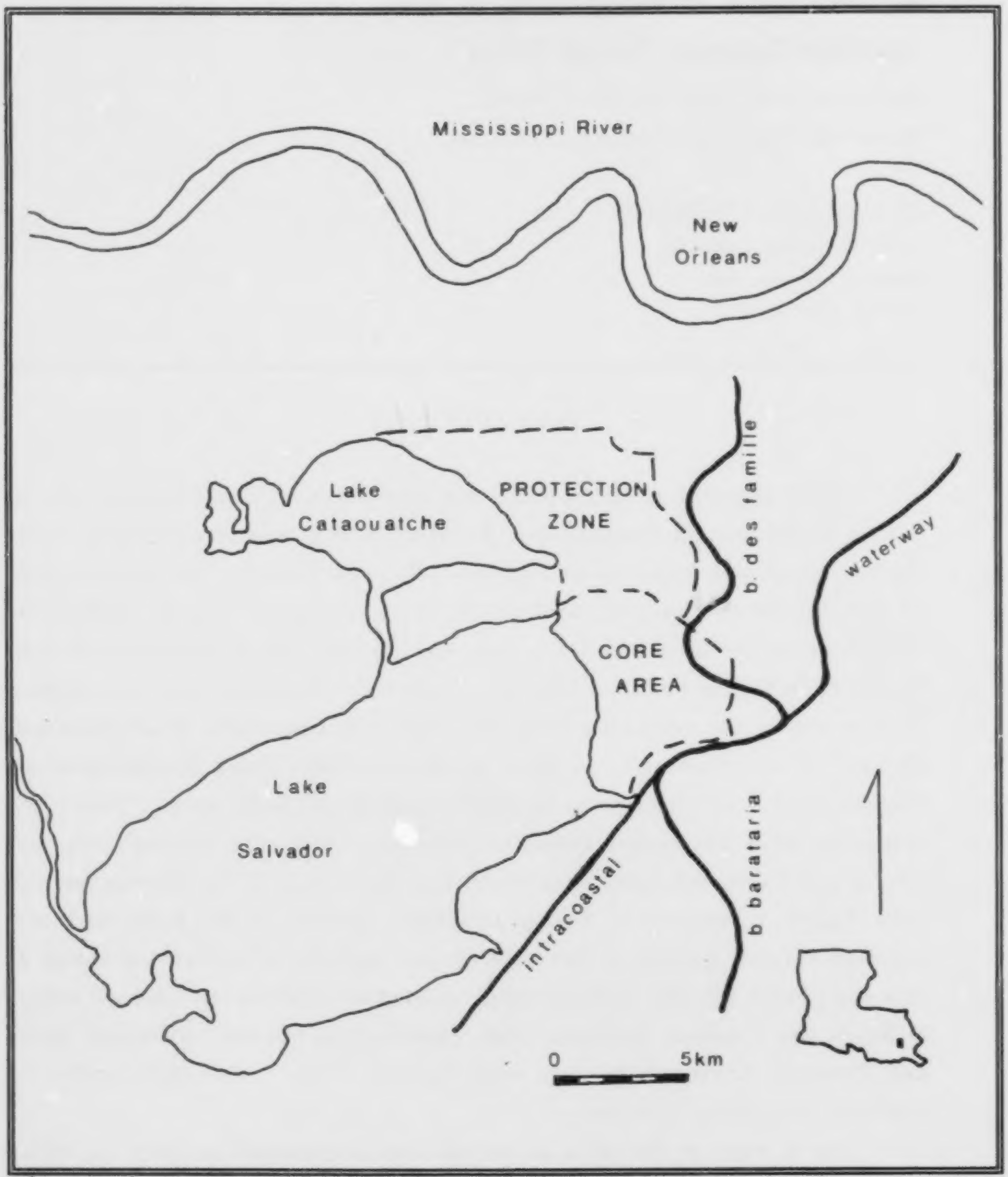
INTRODUCTION

Work reported in this volume was performed by Earth Search, Inc. in partial fulfillment of Contract No. RFQ7029-8-0029 with the National Park Service, Southwest Regional Office, Santa Fe, New Mexico. The initial Scope of Services for this project required intensive survey of 72 acres within the Core Area of the Barataria Unit, Jean Lafitte National Historical Park and Preserve, Jefferson Parish, Louisiana (Figure 1). However, test excavations of sites within the northernmost seven acres were conducted by Dr. Richard Shenkel of the University of New Orleans and Ms. Susan Hammersten of Florida State University prior to commencement of field work. Therefore, this seven acres was deleted from the study area. Instead, a rigorous program of site definition and hand excavation was conducted at six colonial period sites (Figure 2) reported by Swanson (1988a). Results of this field work are reported herein. Results of intensive survey and site definition are reported in a companion volume, *Archaeological Survey of 65 Acres of Land Adjacent to Bayou des Familles, Barataria Unit, Jean Lafitte National Historical Park and Preserve, Louisiana* (Franks and Yakubik 1988). This latter study is referred to as "Part I," below.

Field work at the colonial period sites commenced on July 11, 1988, concluded on October 5, 1988, and consisted of 44 person days. Artifacts, field notes, and photographs of the various sites and excavations are curated at Jean Lafitte National Historical Park and Preserve, New Orleans, Louisiana (Park Catalogue Number JELA 45).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PROTECTION ZONE
CORE AREA
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waterway
Lake Salvador
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Figure 1. Barataria Unit including the core area and the park protection zone.

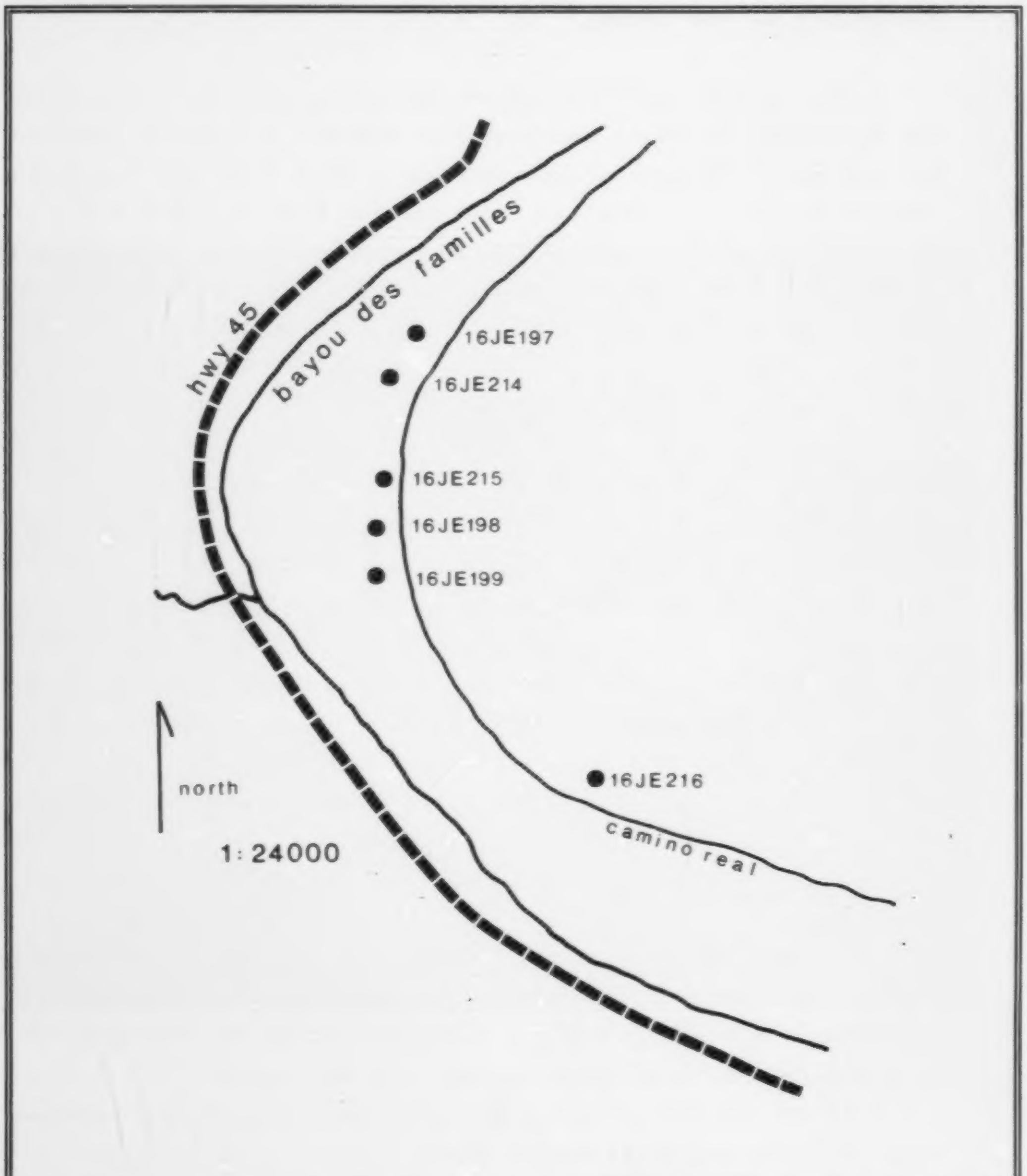

hwy 45
bayou des familles
16JE197
16JE214
16JE215
16JE198
16JE199
16JE216
camino real
north
1: 24000

Figure 2. Map showing locations of the Spanish Colonial sites.

Methodology for Site Testing

Each site was carefully examined for surface artifacts. A site datum was established, and shovel tests were excavated at 5 m intervals along two bisecting lines. Horizontal definition along these lines was considered complete when a minimum of two sterile tests had been excavated in each of four directions. Additional shovel tests were excavated at five meter intervals along a grid off the original bisecting lines at 16JE197, 16JE214, 16JE198, 16JE199, and 16JE216, and along four rays from the datum at 16JE215. Horizontal definition along these lines was considered complete when one sterile test was excavated in each direction.

Shovel test dimensions for site definition were 30 x 30 cm, and they ranged from 30 to 50 cm depth. All soil excavated from shovel tests was screened through 1/4 inch mesh. At least one 1 x 1 m unit was excavated at each of the six sites (Figure 3). These were excavated in levels of 10 cm or less to sterile substrata. All excavated soil was screened through 1/4 inch mesh. At least one profile of each excavation unit was drawn. Strata within each excavation unit were characterized according to soil type and Munsell color. A soil probe test was excavated in the floor of each completed unit to a depth of one meter in order to characterize underlying soils.

A map was prepared for each site using compass and tape. The maps depicted locations of shovel tests and excavation units, locations of surface scatters of artifacts, and locations of important natural and cultural features present.

Sites 16JE197, 16JE198, 16JE199, 16JE214, and 16JE215 were visited in February and March 1989 to determine if additional cultural features could be discerned while foliage was at a minimum. During this reconnaissance, three additional potential Canary Islander sites were located.

All six sites were evaluated as eligible for nomination for inclusion on the National Register of Historic Places.

Figure 3. Excavations of the brick feature at 16E215 showing physical environment of the colonial sites.

ENVIRONMENTAL SETTING

Physiographic and Biological Setting

The Spanish Colonial Period sites lie within the core area of the Barataria Unit of the Jean Lafitte National Historical Park and Preserve, situated within the Barataria Basin (Figures 1 and 2). The basin itself encompasses approximately 400,000 hectares (990,000 acres). It is approximately 129 kilometers (80 miles) long. Lake Des Allemands lies near its headwaters, while the Gulf of Mexico is its southern terminus. Several large, shallow lakes are situated within the Basin. These lakes are interconnected by bayous and surrounded by marshland. The marshland itself is bordered by higher ground that is the result of alluvial deposition from formerly active Mississippi River distributaries (White et al. 1983:101-102).

Barataria Basin is a broad, low-lying region that represents an abandoned Mississippi River delta complex and the adjacent estuarine and offshore waters associated with that complex. It is characterized by a set of ecological parameters which are integrated into a dynamic ecosystem with enormous biological productivity. The prime integrating feature of this ecosystem is water. Primary units of the system are forests, fresh water marshes, brackish marshes, saline marshes and the offshore area. The Basin lies within an area that is, at present, subsiding and eroding (Bahr and Hebrard 1976:1-3).

Geomorphic Formation of the Barataria Basin

The Mississippi River deltaic plain is the composite result of previous and present progradations of the river. Four delta complexes have produced the modern deltaic plain, which encompasses most of southern Louisiana. These are termed the Teche complex, the St. Bernard complex, the Lafourche complex and the Plaquemines-Modern complex. The complex that preceded these is termed the Maringouin delta complex (Frazier 1967:288,296).

During the progradation phase that formed each of these delta complexes, sediments were deposited into shallow waters at the mouths of distributaries. Landforms associated with such progradation are termed "lobes." Usually one course within the complex was favored over the others, so that the majority of the river's discharge and its associated sediments flowed through a single trunk. The result was formation of a natural levee as floodwaters deposited the sediment load adjacent to the stream. The natural levee increased in height so that eventually only the highest of the seasonal floodwaters overflowed. Vegetation flourished as conditions on the natural levee stabilized. Eventually, however, continued progradation led to an overextension of the distributary network. The result was diversion of the river's waters into an underdeveloped upstream distributary. Thus, the cycle of delta formation began again (Frazier 1967:288).

The abandoned distributary was no longer capable of prograding or of aggrading the deltaic plain. Subsidence began as the result of compaction of the underlying clays. At the distal end, barrier islands formed as distributary-mouth-bar sands were reworked by waves. Between these islands and the mainland, a bay environment was created (Frazier 1967:288).

Bayou des Familles was associated with the St. Bernard delta complex, and it is "lobe seven" in Frazier's sequence of sixteen lobes. It was the main distributary of a broad delta lobe that formed about 3500 to 2500 B.P. Radiocarbon dates indicate that deposition associated with flow through Bayou des Familles was occurring until approximately 2000 B.P. The Spanish Colonial Period sites occur on the natural levee of Bayou des Familles. Although the bayou was no longer a main distributary, it continued to receive some discharge from the main trunk of the Mississippi River, at least during flood stages. The natural levee that had formed along its banks represented, in the eighteenth century, an area that was relatively high and dry and therefore, at least adequate for settlement by Europeans. In addition, this natural levee supported a diverse floral and faunal community that had been exploited for food and shelter by the Indians in the region for thousands of years (Frazier 1967:301).

Climate

The study area is located within the subtropics, and weather is strongly influenced by the nearby Gulf of Mexico. Rainfall exceeds 160 cm (64 inches) annually. Periods of greatest rainfall generally occur in August and September. October is, on average, the driest month. The mean annual temperature is about 21o Centigrade (70o Fahrenheit), with a mean low in January averaging 11o Centigrade (52o Fahrenheit) and a mean high in July of about 29o Centigrade (84o Fahrenheit). The growing season exceeds 260 days (White et al. 1983:103). Hurricanes and storm surges occur intermittently, and these have profound effects on floral, faunal and human communities within the Barataria Basin.

Soils

The soil association which occurs in the area of the Spanish Colonial Period sites is Sharkey clay. This is characteristic of the natural levee associated with Bayou des Familles as is Commerce silty clay loam. Barbary muck, Allemands muck, and Kenner muck represent soils associated with nearby swamps and freshwater marshes, both of which are habitats well-suited to plants and animals that probably were important to the historic period economy in the area. Locations of these soil associations are shown in Figure 4.

Soils associated with areas of the natural levee immediately adjacent to Bayou des Familles are categorized as Commerce silty clay loam (Figure 4). These are poorly drained, firm mineral soils. The surface layer generally is a dark grayish brown slightly acid silty clay loam about 5 inches (11 cm) thick. Below this and to a depth of about 72 inches (158 cm) is a grayish brown, neutral silty clay loam. Thin layers of clay are sometimes present in this subsoil. The Commerce soil has high fertility and moderately slow permeability. Run-off is slow, and water usually stands in low places for a short period following heavy rains (Matthews 1983:15-16).

Commerce soil is well-suited to pasture and to cultivated crops. Vegetables are the predominant crop grown on these soils at present, but it is also suitable for sugarcane, soybeans and corn. However, the soil is slightly sticky when wet, and it is hard when dry so that it can be worked only within a limited range of moisture content (Matthews 1983:16).

The soil on the lower portion of the natural levee and at a somewhat greater distance from Bayou des Familles is classified as Sharkey clay (Figure

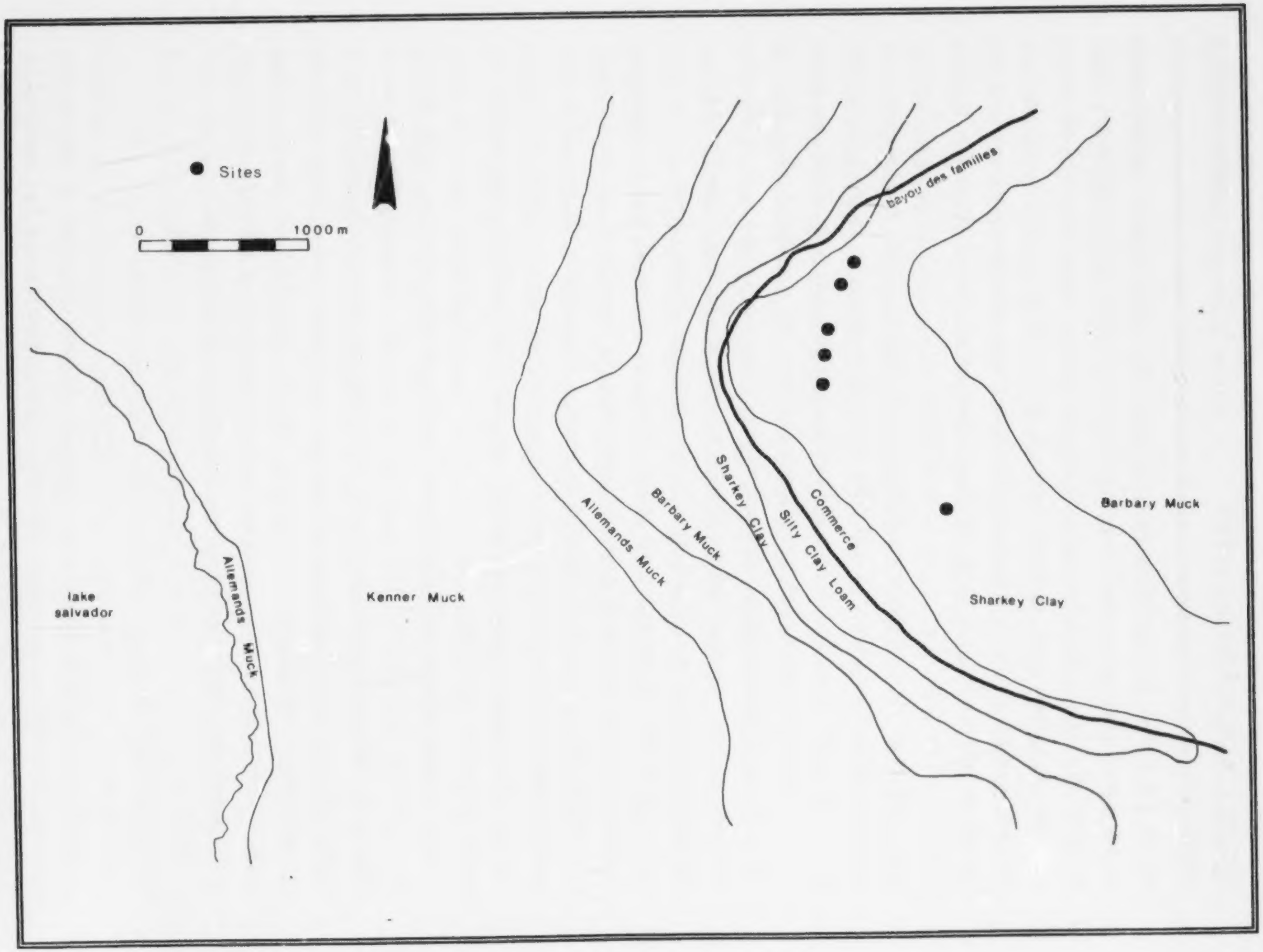

Sites
0
1000 m
bayou des familles
Barbary Muck
Commerce
Silty Clay Loam
Sharkey Clay
Sharkey Clay
Barbary Muck
Allemands Muck
Kenner Muck
Allemands Muck
lake salvador

Figure 4. Map showing soil associations for the study area and vicinity.

4). It is a poorly drained, firm mineral soil. The surface later is a dark gray or very dark grayish brown strongly acid clay. It extends to a depth of about 4 inches (9 cm). Underlying subsoil, extending to a depth of about 60 inches (132 cm) is a dark gray, mottled, neutral and moderately alkaline firm clay. Sharkey soil is very slowly permeable. Water runs off at a slow rate, and it stands in low places for short periods after heavy rains. Fertility is high (Matthews 1983:18).

Sharkey clay is well suited for pasture, but it is only moderately well suited to cultivated crops. Vegetables have predominated as the crop grown on this soil, but it is also suitable for cultivation of sugarcane, soybeans, grain sorghum and rice. The plow zone is sticky when wet and hard when dry. It becomes very "cloddy" if worked when either too wet or too dry. A further problem is that wetness delays tillage operations in most years. Also, a drainage system is needed for most crops (Matthews 1983:18-19).

At a still greater distance from Bayou des Familles, soil is classified as Barbary muck, which is a very poorly drained, semifluid soil that occurs in swamps (Figure 4). It is flooded or ponded during most of the year. The areas in which this soil occurs are an important habitat for wetland wildlife. Without drainage and flood protection, the soil is unsuitable for pasture or for crops (Matthews 1983:15).

Two additional soils are located at even greater distances from Bayou des Familles. The first is Allemands muck, and the second is Kenner muck (Figure 4). Both are semifluid organic soils that occur in freshwater marshes. These soils are almost continuously flooded by several inches of fresh water, but in storms they may be covered by two or more feet of water. Areas associated with these soils represent habitats for wetland wildlife. They are not suitable for pasture or for crops (Matthews 1983:12-13,15).

Plant Communities

The study area for this project lies on the east side of Bayou des Familles. Deposition associated with this former distributary has resulted in a strip of relatively high land, approximately one meter above mean sea level. To the east and west of this "natural ridge," elevation declines. These elevation changes have led to the development of distinctively different plant communities. One of these is a "hardwood bottoms" community occurring on the highest land along Bayou des Familles. The "cypress-tupelo" forests, also paralleling the bayou, occur east and west of the bottoms community. These are located at slightly lower elevations. An intermediate swamp is located between these two communities. Similar floral associations characterize other natural waterways within Barataria Basin. Large tracts of marsh occur in surrounding areas (White et al. 1983:102).

Elevation of the land dramatically affects distribution and composition of plant communities within the area. Differences of only a few centimeters of elevation are associated with striking changes in vegetation. This is largely the result of the effects of soil saturation (White et al. 1983:103).

Hardwood bottom forests along Bayou des Familles are dominated by the water oak (*Quercus nigra*). Subdominants include the sweet gum (*Liquidambar stryaciflua*), hackberry (*Celtis laevigata*), and live oak (*Quercus virginiana*). Other forest species include the box-elder (*Acer negundo*), honey-locust (*Gleditsia triacanthos*), American elm (*Ulmus americana*) and the Nuttall oak (*Quercus nuttallii*). The most common shrub species are palmetto (*Sabal minor*) and green haw (*Crataegus viridis*), but thickets of possum-haw (*Ilex decidua*) also occur. Within forest gaps, elderberry (*Sambucus canadensis*) and French-mulberry (*Callicarpa americana*) occur. Introduced species such as the camphor tree (*Cinnamon camphora*) are also present (White et al. 1983:103-104).

Vines are found throughout the bottomland forest, and few trees are observed without them. The most common of these include poison-ivy (*Rhus toxicodendron* var. *vulgaris*), Virginia creeper (*Parthenocissus quinquefolia*), supple-jack (*Berchemia scandens*), pepper-vine (*Vitis rotundifolia*), muscadine (*Vitis rotundifolia*) and hemp-weed (*Mikania scandens*) (White et al. 1983:104). Herbaceous ground cover is generally absent.

The cypress-tupelo swamps, located a greater distance from Bayou des Familles, are dominated by bald cypress (*Taxodium distichum*) in areas where it has been re-established after logging. Water tupelo (*Nyssa aquatica*) is often either a sub- or co-dominant species. Red maple (*Acer rubrum* var. *drummondii*) and ash trees (*Nyssa aquatica*) represent the other sub-dominants in this community. Shrubs include wax-myrtle (*Myrica cerifera*) and button-bush (*Cephalanthus occidentalis*), while vines are cat-briar (*Smilax* spp.), trumpet-creeper (*Campsis radicans*) and poison ivy. Herbaceous ground cover, absent in the bottomland community, includes smart-weed (*Persicaria punctata*), alligator-weed (*Alternanthera philoxeroides*), swamp potato (*Sagittaria lancifolia*) and water hyacinth (*Eichhornia crassipes*) (White et al. 1983:105).

Between the hardwood bottom forest and the swamp forests, an intermediate swamp forest sometimes occurs. It can be extensive due to gradual slope of the land. Swamp red maple, American elms, and water oaks are common here. Palmettos create a dense understory, which is nearly impenetrable in some locations (White et al. 1983:105).

The above-described communities probably were present throughout the period of historic occupation within the area. Their extent, however, may have changed due to episodes of deposition and subsidence. Studies of a plant community in the 1930s along an abandoned distributary channel about 30 miles northeast of the park, and of a swamp forest within the upper drainage area of the Barataria Basin resulted in species lists similar to those outlined above (White et al. 1983:104,106).

The other predominant plant community within the Barataria Basin occurs in the marsh areas. Marshes are categorized according to their degree of salinity, and the areas covered by the various marsh communities have certainly changed through the period of prehistoric occupation due to variation in fresh water influx compared to salt water intrusion.

The ecological distinction between a swamp and a marsh is the absence of trees in the latter. Marsh soils are peat and muck, and elevation of these is less than one meter above mean sea level in the vicinity of the study area. This elevation is comparable to that of Lake Salvador on which the marshes border. In the brackish or intermediate marsh, cord grass (*Spartina patens*) is dominant, while swamp-potato (*Sagittaria lancifolia*) predominates in freshwater marsh. Numerous other species co-occur with these (White et al. 1983:106-107).

A complete floristic inventory for the core area of the Barataria unit is available in White et al. (1983:113-129).

Fish

Barataria Basin hosts a diverse assemblage of species of fish. They are highly mobile, and seasonal movements of fish populations are widespread. The result is that marine fish penetrate inland to fresh water habitats, while fresh water species are sometimes found in more saline environments. Also, the lower reaches of freshwater streams probably serve as nursery areas for the young of some marine species (Bahr and Hebrard 1976:69).

Reptiles and Amphibians

Barataria Basin hosts at least 26 reptilian species, of which 14 are snakes. The American alligator (*Alligator mississippiensis*) and various species of turtle are common. At least 14 species of amphibians occur or are likely to occur in the Basin. Most of these are frogs and toads (Bahr and Hebrard 1976:74-77).

Birds

At least 216 species of birds are known to occur in the Barataria Basin. Approximately 43% of these are passerines. Some species of this group are permanent residents, while others are only present seasonally. The remainder of the 216 species are predominantly waterfowl, many of which are migratory. Because the Basin sits at the terminus of the Mississippi flyway, which is the largest waterfowl migratory route in North America, birds represent a potentially abundant source of food (Bahr and Hebrard 1976:6-7,78-115).

Mammals

Important fur-bearing species present within the Basin are the muskrat (*Ondatra zibethicus*), raccoon (*Procyon lotor*), mink (*Mustella vison*) and otter (*Lutra canadensis*). Nutria (*Myocastor coypus*) are a recent introduction and were not present during the historic period.

Other mammals known to occur in the area include the Virginia opossum (*Didelphis virginiana*), the nine-banded armadillo (*Dasypus novemcinctus*), the swamp rabbit (*Sylvilagus aquaticus*), the fox squirrel

(*Scirus niger*), the fox (*Vulpes fulva*), the bobcat (*Lynx rufus*), the beaver (*Castor canadensis*), the civet cat or spotted skunk (*Spilogale putoris*), and the white-tailed deer (*Odocoileus virginianus*). In addition, several species of terrestrial rodents and of bats are endemic (Bahr and Hebrard 1983:118-126).

HISTORIC OVERVIEW OF CANARY ISLANDER SETTLEMENT IN BARATARIA

The focus of the following discussion is the period of Canary Islander settlement in Barataria. Data presented here are derived primarily from Swanson (1988a; in press) and Din (1988). For more detailed consideration of land use within Barataria for the periods before and after Islenos settlement, the reader is referred to Holmes (1986) and Swanson (1988a), as well as to Part I of this study. For additional information on the Canary Islanders in Louisiana, see Swanson (1988a; in press) and Din (n.d.; 1988).

Immigration of the Canary Islanders

In 1762, France ceded Louisiana to Spain in the secret Treaty of Fontainebleau. Spain, however, did not take formal possession of the colony until 1769. Louisiana at this date still had a small population, and the colony had not yet proved to be profitable. The eastern boundary of the territory was the west bank of the Mississippi River and the "Isle of Orleans" (the area surrounded by Bayou Manchac, the Amite River, Lake Maurepas, Lake Pontchartrain, and Lake Borgne). The British were located immediately to the east in West Florida.

Disputes with the British in the late 1770s emphasized the need to strengthen Louisiana's defenses. Accordingly, the Spanish Crown authorized recruitment of 700 soldiers from the Canary Islands. Preference was given to the enlistment of married men, who, with their families, would become permanent settlers in the colony. It was hoped that the settlers would further Spain's objectives to build up colonial defenses, to promote commerce and industry, and to increase the Hispanization of the colony (Din 1988:13-14).

Between April 1778 and May 1779, 700 soldiers and their families (a total of 2,373 individuals) were recruited for immigration. Eighty-five percent of these settlers were from the islands of Tenerife and Gran Canaria, and the remainder were from Gomera, Lanzarote, and La Palma (Din 1988:17). The immigrants were destined for four colonies in Louisiana: Galveztown on Bayou Manchac near the Spanish/British border; Valenzuela on Bayou Lafourche; Bayou Terre-aux-Boeufs in St. Bernard, and Barataria. The strategic importance of Barataria was that it was a route from the Gulf to New Orleans.

Immigration commenced in September 1778 with the departure of the packetboat *Santisime Sacramento* from Tenerife. The ship arrived in New Orleans in November, but only one family of six from the 264 passengers settled in Barataria. The poleacre *La Victoria* and the frigate *San Ignacio de Loyola*, together carrying 770 passengers, arrived the following January. Forty-five families totaling 196 individuals settled in Barataria. A family of four who arrived on the frigate La Santa Faz in February also settled in Barataria. Finally, the packetboat *San Juan Nepomuceno* brought the Barataria settlement 10 families (46 individuals) among its 221 passengers in March (Swanson 1988a:99-101). Thus, a total of 57 families (252 persons) were originally settled in Barataria.

Lands Used for the Barataria Settlement

The Spanish government had acquired land adjacent to Bayou des Familles for the Canary Islander settlement. Much of this land had been originally granted to Jean-Baptiste Massy, Jean-Baptiste Bourbeau, and Charles Frederig de Merreilleux in 1726 for the purpose of lumbering. Later, the partnership dissolved and Massy eventually moved to Barataria, where he raised cotton, tobacco, and livestock. After 1734, Massey's widow used the property for a horse ranch. During the 1750s, Jean Antoine Bernard Dauterive received a grant which included Massy's former holding, and he established his headquarters at the confluence of Bayous des Familles and Barataria (Swanson 1988a:80-84).

Dauterive subdivided his plantation into 10 arpent front tracts in 1768. The four easternmost tracts, which include the study area, were purchased by the fur traders Antoine Boudousquie and Elie Hugues that year. The latter sold his interest to Alexandre Guerbois in 1772. The two sold the easternmost 20 arpents front to Pedro Alberto Bonne in 1774, and partitioned the remaining 20 arpents. Boudousquie received the tract adjacent to Bonne's; there is no evidence that he utilized it. Guerbois resided on his property in the vicinity of present-day Crown Point. He made little use of his back lands within the study area. The remainder of Dauterive's lands remained in the possession of his heirs (Swanson 1988a:84-87).

In 1779, the Spanish government acquired Bonne's 20 arpent front tract through purchase from Bonne and through donation by Andres Jung, who had purchased one-half of Bonne's tract from Luis Pellerin. Jung had been named Commandant of the Canary Islander settlement (Swanson 1988a:94-95).

Because a large portion of the tract consisted of backswamp, Spain repossessed adjacent unused lands, including the backlands of Boudousquie, Guerbois, and Dauterive's heirs along Bayou des Familles. This bayou, known as Barataria until this time, was renamed des Familles for the settlement of Islenos which extended for seven miles north of present-day Bayou Barataria along both banks of des Familles (Swanson 1988a:94-95).

Provisions for the Settlers

Swanson (1988a:94) states that by July 12, 1779, the Canary Islanders had been established in Barataria, and that houses had been constructed for them by Joseph Chalon. Governor Bernardo de Galvez had previously decreed:

> ...the commandant shall take pains to locate them in the most suitable place, as near as possible to each other, that distance may not make impossible the aid which they must render to one another. The commandant shall assign to each family a frontage of five arpents, with the customary depth (Swanson 1988a:115-116).

Galvez also ordered that the immigrants be supplied with a barrel of corn for each adult and a half barrel for each child under 12. Each family was to receive an ax, a hoe, a scythe or sickle, a spade, two hens, a cock, and a pig. In addition, the initial supplies to the Barataria settlement included four pirogues and twenty-four mill stones (Swanson 1988a:115-116).

In addition, the "Libro Maesto P.[ara] sentar el cargo del dano de la nueb Pob.[lacion] Barataria" (Master Book to set the responsibility for damages of the new Barataria Settlement) records the disbursements made to the Canary Islanders between 1779 and 1783. These included cloth and thread as well as blankets, mosquito nets, shoes, hats, handkerchiefs, breeches, shirts, cloaks, petticoats, and shawls. Tools such as axes, hatchets, hoes, sickles, knives, rifles, and shovels were given. Household goods such as cauldrons and kettles were supplied, and families were given money to buy other goods (Swanson 1988a:114-115).

Spatial Organization of the Settlements

The community established at Galveztown is the best documented of the four Canary Islander settlements. Here, the colonists resided in a fortified grid-pattern town with outlying agricultural fields for each family (Din 1988:30-33; Swanson 1988a:119). Similarly, the colonists at Valenzuela lived in a clustered community with separate fields (Din 1988:65; Swanson 1988a:119).

The arrangement of the settlement in St. Bernard may have been different. Data presented by Din (n.d.; 1988) concerning the St. Bernard settlement are ambiguous. He states that the inhabitants of St. Bernard were not forced "to huddle together in a single community" (Din 1988:52) as was the case at Galveztown, and that their lands were "spread out along the Bayou" (Din n.d.:68). However, he also records that "the authorities formed three tiny communities with the colonists, each about a league apart" (Din 1988:52). Din suggests that the purpose of the separate communities was to "avoid the harm resulting from them living too far from their lands" (Din n.d.:65), which would in fact be consistent with Galvez's decree (above).

No documentary evidence of the specific settlement pattern for Barataria has been recovered to date, although archival data has provided clues to the spatial organization of the community. Swanson (1988a:119-120) originally argued that these settlements were arranged linearly along the bayou, and each family resided on their five or six arpent front parcel. She subsequently suggested that each family's holdings may have been three arpents front on either side of the bayou, giving a total frontage of six arpents (Swanson 1988b). These hypotheses were based both on map data for the township above the study area and the results of her 1988 survey.

The results of archaeological field investigations seem to confirm that the settlement was arranged linearly along the bayou (Figure 2). The Canary Islander sites within the Barataria Unit that have been located to date are all on or near the crest of the natural levee of the abandoned Barataria-des Familles distributary channel. All are near (approximately 60 m distant) to the old Barataria Road. This route, which was originally established in the French Colonial Period, was reconstructed or realigned by the Spanish government prior to the settlement of the Canarians (Swanson 1988a:121, 241-242).

The Demise of the Barataria Settlement

Although Governor Galvez expected that the settlements would soon become independent, the unsuitability of the area for residence and agriculture as well as a series of natural disasters hindered the growth of the Baratarian community. Devastating hurricanes occurred in 1779, 1780, 1793, and 1794. In addition, the settlement was flooded by Mississippi River crevasses in 1796 and 1802-1804 (Swanson 1988a:97-98).

Din (1988:48) reports that many of the Baratarian colonists wanted to leave within a year of the settlement's founding. Governor Galvez ordered the commandant of Valenzuela, Lieutenant Antonio de St. Maxent, to escort a group of the Baratarians to the Bayou Lafourche community. Sixteen families left in late 1779/early 1780.

Some of the Baratarian Islenos petitioned the St. Bernard community commandant to permit them to move to his settlement in 1782. Shortly thereafter, twenty-five heads of households in Barataria made a similar petition to Juan Ventura Morales, who had charge of immigration. The request was authorized, and the settlers who intended to move were given tools, clothing, rations, and provided with houses on Bayou Terre-aux-Boeufs. Aid to the Barataria settlement was suspended in an effort to force all of the Islenos to leave. Approximately 111 Islenos left Barataria for St. Bernard in late 1782/early 1783 (Din 1988:49-50). In addition, eight families were relocated to Valenzuela in 1782 (Swanson 1988a:115).

A few Islenos families remained in Barataria following this exodus. Some, such as the Bernardo Nieves family, left within a few years (Din 1988:51). A 1788 census lists 40 persons, 25 of whom were white, in the "Pueblo" of Barataria. In addition, five Islenos families totaling 27 persons lost their crops and animals in the 1796 flood (Swanson 1988a:98). Din (1988:51) suggests that these remaining Canarians were independent of the Spanish government, and that they probably fished and raised livestock.

The Mississippi River crevasse of 1802 was not closed until 1804, and the majority of the remaining Canarians were moved to St. Bernard during this period (Swanson 1988a:98). However, at least two Islenos households, those of Maria Olivares and Francisco Sanchez, remained in Barataria following the flood.

Maria Olivares

Maria Olivares, her husband, Pablo Suarez Ruiz, and their son were among the original Baratarian settlers who arrived on the frigate *San Ignacio de Loyola*. Records show that the family was repeatedly re-established in Barataria after natural disasters. In 1800, Governor Casa-Calvo granted Suarez seven arpents eight toise front on both banks of Bayou de Familles by 40 arpents depth. The property included Sections 3 and 38 and part of Section 1 in T15S, R23E. Records suggest that the residential area of the holding was on the east bank of the bayou (Swanson 1988:142-143, 145-146).

Both Suarez and his son died, and Maria married Jose Galvez, a native of Cartegena. Galvez died in 1802, and Maria remained in Barataria until her death in 1807. A "principal cabin," three Negro cabins, a creamery, and a chicken house were on her property at the time of her death, and she owned two slaves. Her livestock consisted of 48 cows, six horses, 28 goats, four pigs, and 25 chickens. Movable articles listed in the inventory of her estate included six cauldrons, a cross-cut saw, an evaporating pan, two candle molds, a cypress armoire, a wooden chest, and a bed. Kitchenware included five spoons, ten plates, a dish, a coffee pot, a water pot, a soup tureen, and five shallow bowls. Food stores consisted of two barrels of corn, a barrel of rice, a barrel of wheat, and a demijohn of rum (Swanson 1988:144-145).

16JE197, one of the six Colonial period sites discussed below, may have been Maria Olivares' residence. The site is located on the lower boundary of her property, and a newly discovered site, Potential Colonial Site 7, is located within her holding. The proximity of the two sites suggests that they were related, and the smaller mound on Potential Colonial Site 7 may have been the site of one of the slave cabins.

Francisco Sanchez

Francisco Sanchez settled in Barataria in 1779 with his wife and two sons. By the time of the 1796 flood, he was a widower with seven children. The records indicate that he remained in Barataria after the 1802-4 flood (Swanson in press; personal communication 1989).

Documentary evidence states that his property was located by the confluence of Bayous de Familles and Coquilles, and that his residence was on the east bank of the former near the Camino Real. Although the precise size and location of his property is unknown, Swanson (in press) places it immediately below the Olivares tract on the basis of references to Sanchez's holdings in other property descriptions. If this hypothesis is correct, then 16JE214 might be the site of his residence.

LABORATORY METHODS

All artifacts were washed, sorted, and identified. Ceramics, glass, and nails were described using formal archaeological classifications presented below. Detailed consideration of the materials recovered from individual sites is presented with the results of field investigations, below.

Historic Ceramics

Methodology. A paradigmatic classification (Dunnell 1971:84) which is the product of the combination of unweighted classes of paste, glaze, and of decorative type (Yakubik 1980) was utilized to describe historic Euro-American ceramics. The advantage to this method is that it provides a more complete and flexible definition of these ceramics by its ability to handle ambiguous and transitional ceramic types. This ultimately facilitates tighter chronological control. Because decorative type is treated as an equal class relative to paste and glaze, it permits the examination of socio-economic issues concerning ceramic use (Worthy 1982; Miller 1980). This classificatory framework has proven useful during previous research both at eighteenth and nineteenth century sites in rural and urban settings.

Tin glazed earthenware. Tin glazed earthenwares manufactured in the Mediterranean and Mexico are generically referred to as majolica. Those from France commonly are called faience, and those from Great Britain and Holland are called delft. Where the country of origin of a particular sherd is in question, these ethnic distinctions should be avoided. Although manufacture of tin glazed earthenware in Great Britain began in the second half of the sixteenth century, the ware had been produced in Continental Europe since the Middle Ages. Use of tin glazed earthenwares declined during the late eighteenth century as inexpensive, clear glazed, cream colored earthenwares gained popularity.

The ceramic paste of this type ranges from buff to pink or red. The color depends on the impurities in the clay as well as the firing time and temperature. Brain (1979:44) has suggested that faience paste color may have chronological significance, and that the earlier wares tend to have a buff earthenware paste. Examination of collections from the Chalmette Battlefield in St. Bernard Parish, from the Hermann-Grima House site in New Orleans, and from Elmwood Plantation in Jefferson Parish have yielded ambiguous results concerning the temporal significance of paste color (Yakubik in prep).

Vessels are formed by throwing, jiggering, or stamping. The ceramic body is covered with a lead glaze which contains tin oxide. The result is an opaque, milky white glaze referred to as a tin glaze or a tin enamel. The glaze is sometimes tinted by the addition of other metal oxides. For example, cobalt oxide produces a blue glaze. Tin glazed earthenwares are commonly decorated with hand-painting.

The vast majority of tin glazed earthenwares found on sites in southeastern Louisiana are faience, i.e. of French manufacture. The ware is commonly recovered from eighteenth century contexts. French faience production was at its height in the early eighteenth century. One distinctive type, brown faience (faience brune or Rouen ware), was introduced at this time. Paul Caussy claims to have invented the type, and he requested authorization to build a kiln in 1707. By 1788, 12 of 15 factories in Rouen were producing brown faience (Blanchette 1981:23-24).

Brown faience usually has a brick red paste, although pink and buff examples have been recovered in southeastern Louisiana (Yakubik in prep). The vessel exteriors have an opaque brown, manganese glaze. The interiors have a tin glaze which often runs over the rim of the vessel. Decoration, if any, is almost always monochrome blue. Polychrome decoration is rare.

Faience was replaced by creamware during the late eighteenth century in southeastern Louisiana.

Coarse Earthenwares. This category includes red to buff colored earthenwares with a wide variety of surface treatments. Individual types are defined on the basis of paste color, glaze, and decorative treatment. The majority are wheel thrown, and they were produced for utilitarian purposes. Paste color results from the presence of iron compounds and other impurities in the clay, and from variability in firing temperature and atmosphere. These wares are fired at low temperatures. Earthenware becomes hard fired at 950-1100 degrees (viz Rhodes 1973:22). Because pure earthenware clays cannot be fired to complete vitrification, red colored earthenware tends to be more fragile than porcelains and stonewares (Rhodes 1973:47).

Because they can be hard fired at relatively low temperatures, and because red colored earthenware clays are readily available in many locales, coarse earthenwares generally are not good chronological indicators. However, coarse redwares and buff earthenwares are commonly found in eighteenth century contexts in southeastern Louisiana. Usage of these types decreased during the nineteenth century.

Similarly, it is often difficult to determine the place of manufacture. It is likely that some coarse earthenwares were manufactured locally in Louisiana. However, many of the coarse earthenwares recovered during the present investigations appear to be European in origin, and resemble types from the Fortress of Louisbourg, Nova Scotia (Barton 1981), from the wreck of the *Machault* in New Brunswick, Canada (Barton 1977), from the Cahokia Wedge site in Illinois (Walthall and Gums 1988), and from the Trudeau site in West Feliciana Parish (Brain 1979). Similar coarse earthenware types have been recovered from a number of southeastern Louisiana sites (below).

Coarse earthenwares are usually glazed to render them impermeable to liquids. The most common surface treatment on redwares is a lead glaze covering the entire vessel, or confined to the interior or exterior vessel walls. Sherds of this type are rarely diagnostic in terms of place of manufacture, particularly when vessel form cannot be determined. However, Barton (1981:35) describes a group of French lead glazed redwares as having a pink or red paste with a yellow to brown glaze. The glaze is flecked brown as a result of iron in the vessel fabric. This category of ceramics corresponds to Lead Glazed Earthenware Type B from the Trudeau site (Brain 1979:50-56) and to Charente Plain as defined by Walthall (Walthall and Gums 1988:149). Sherds fitting this description were recovered during the present investigation at sites 16JE197, 16JE198, 16JE214, 16JE215 and 16JE216. Similar sherds have been collected at Elmwood Plantation (Goodwin, Yakubik and Goodwin 1984), at sites on Golden Ranch Plantation (Hunter et al. 1988), at sites on the west bank of the Mississippi River in Orleans Parish (Franks and Yakubik 1989), at the Chalmette Battlefield, and at Fortier Plantation (Yakubik in prep). It is likely that all of these examples are of French origin.

A few of the sherds recovered from 16JE198 and 16JE216 were white-slipped on the interior prior to the application of an interior lead glaze. Both the glazes and the slips on all of these sherds were badly eroded. Again, such surface treatment is common, and it is difficult to assign a place of manufacture without information on vessel form. However, Barton (1981:23-27) describes a group of southern French white slipped and glazed redwares recovered from the Fortress of Louisbourg. Some of these ceramics have either sgraffito or trailed slip decoration; others were left undecorated (Barton 1981:25). The sherds recovered during the present investigation could be representatives of this type.

One redware sherd from 16JE216 had a white interior slip that shows brownish-yellow through the glaze. White slips characteristically appear yellow through a lead glaze, and the "muddy" appearance of this sherd may be the result of impurities in the glaze itself. If so, this may also be a representative of the above type.

Four small redware sherds with buff colored slips were collected from 16JE216. One had a buff interior slip and was lead glazed on both the interior and exterior vessel surfaces. The glazes were eroded from the remaining three sherds. One of these had a buff slip on the interior with possible remnants of a covering lead glaze. One was slipped on both the interior and exterior vessel surfaces. The final sherd had a buff exterior slip; this was possibly a self-slip. The eroded condition of these sherds makes determination of there original appearance problematic.

Two redware sherds from 16JE198 had interior and exterior brown slips and were covered with a lead glaze only on their interiors. A third sherd from this site had remnants of a exterior glazed and a (self?) slip. This latter sherd was a fragment of a large bowl or possibly a cream separator.

Some of the redware sherds recovered during this investigation exhibited evidence of trailed slip decoration. The first of these had an interior white trailed slip over a red slip covered by a lead glaze. This sherd, which was pierced by a hole (for repair?), was recovered from 16JE197. One sherd from 16JE216 had a white interior slip over which a red trailed slip was applied. This sherd was lead glazed on the interior only. The final sherd, also from 16JE216, appears to be the rim of a large bowl. It had a wash of white slip on the interior surface. The exterior of this sherd had white trailed slip decoration, and the entire vessel was covered with a lead glaze.

Trailed slip decoration was a common surface treatment, but it is likely that at least the first two of these sherds were manufactured in France. Red on white and white on red slipwares have been recovered from the Fortress of Louisbourg, and Barton (1981:23-25) attributes them to southern France. Alternatively, white trailed slip decoration is very common on Anglo-American coarse redwares. It should be noted, however, that one sherd from the Cahokia Wedge site having the paste and glaze characteristics of Charente Plain exhibited white trailed slip decoration (Walthall and Gums

1988:149). Similar sherds have been recovered from a number of eighteenth century contexts in Louisiana, including the Chalmette Unit of Jean Lafitte National Historical Park and Preserve and Fortier Plantation (Yakubik in prep).

Sherds with a brown lead glaze and black trailed slip decoration were recovered from 16JE198 and 16JE216. This type, Albisola Slipped, was produced in the Albisola pottery center west of Genoa in Italian Liguria. Samples have been recovered from the Fortress of Louisbourg, Fort Beausejour, and the wreck of the *Machault*. The type has been assigned a late eighteenth century date in southern France and Italy, but it may have been produced as early as the mid-eighteenth century (Barton 1981:46-47). The ware has been found at eighteenth century sites in Louisiana at the Chalmette Unit of Jean Lafitte National Historical Park and Preserve (Yakubik in prep), at sites on Golden Ranch Plantation (Hunter et al. 1988), at sites on the west bank of the Mississippi River in Orleans Parish (Franks and Yakubik 1989), and at Fort St. Leon (Gilmore and Noble 1983:68).

Green glazed buff earthenware is another common type on Louisiana sites dated to the eighteenth century. Referred to here as "Saintonge green glazed buff earthenware," the type generally has a chalky paste with an interior apple-green glaze, although the paste can range in color to pink. The type was one of the two principal wares produced at La Chappelle-des-Pots in southwestern France in the eighteenth century. The type is represented in the collections from the Trudeau site (Lead Glazed Earthenware Type A), from the Cahokia Wedge site (Saintonge Plain), from the Fortress of Louisbourg, from the wreck of the *Machault*, and from Fort Michilimackinac (Brain 1979:45-50; Walthall and Gums 1988:147-148; Barton 1977, 1981:13, 16-20; Miller and Stone 1970). This type was recovered from 16JE197, 16JE198, 16JE215, and 16JE216.

Redware sherds with green interior surfaces were recovered from 16JE216 and 16JE198. The first of these from 16JE216 has a light green, badly eroded slip on the interior vessel surface. No glaze remains on this sherd. The second, also from 16JE216, is a fragment of a large bowl. It has an olive-green glaze on the interior vessel surface. Similar ceramics have been recovered from the Cahokia Wedge site (Walthall and Gums 1988:151) and from the Chalmette Unit of Jean Lafitte National Historical Park and Preserve (Yakubik in prep). They may be related to a group of ceramics recovered from the Fortress of Louisbourg, which Barton (1981:29) suggests may be southern French in origin.

A series of redwares from 16JE216 and 16JE198 with interior green glazes were heavily tempered with quartzite particles and were slipped buff on the exterior. Their pastes are pink and very coarse, and the glazes on two of the sherds are very eroded. These sherds appear to be related to a type recovered from the Fortress of Louisbourg, which Barton (1981:28) describes as having a buff paste tempered with fine quartzite, an interior green glaze, and an oatmeal colored exterior. He attributes this ware, which was also recovered from Fort Beausejour and the wreck of the *Machault*, to southern France (Barton 1981:28).

Several sherds of a southern French storage vessel were recovered from 16JE216. The ware has a buff to pink colored coarse paste and a pale yellow interior glaze. The type has been manufactured in Biot (Alps Maritime) since at least the fifteenth century. This type has been recovered from the Fortress of Louisbourg (Barton 1981:38). Sherds have also been found in Louisiana at the Chalmette Unit of Jean Lafitte National Historical Park and Preserve, at the Hermann-Grima House, and at Elmwood Plantation (Yakubik in prep).

Unglazed coarse earthenwares were recovered from both 16JE214 and 16JE216. The sherd from the former was buff colored, while the three from the latter were pink. The pastes of the sherds from 16JE216 are heavily tempered with quartzite, and are very similar to the pastes of the green interior glazed coarsewares discussed above. Thus, this may be a related type, or the glazes may have completely eroded from the sherds. All of these unglazed sherds appeared to be fragments of large storage vessels.

One sherd of finely made redware with a completely eroded glazed was recovered from 16JE197. In addition, two sherds of manganese glazed redware were collected at this site. The latter are common on late eighteenth century sites in southeastern Louisiana (Yakubik in prep).

Cream colored earthenware. In 1759, Josiah Wedgwood and Thomas Whieldon perfected the manufacture of a cream colored earthenware body. By about 1762, Wedgwood had developed creamware, a type of cream colored earthenware, which contributed to England's increasing control of the world ceramic market (Miller 1980). Creamware has a thin, refined cream colored earthenware body covered with a clear lead glaze tinted with copper oxide. Importation to the American colonies began in the 1760s, and the ware continued in popularity through the first two decades of the nineteenth century. Creamware was recovered from all the Canary Islander sites, but its frequency varied between the sites.

Wedgwood developed pearlware from creamware by 1779. Noel Hume (1969:390; 1970:128) notes that although the pearlware paste contains more flint than that of creamware, the cream colored earthenware bodies of the two are virtually identical. The primary distinction between the types is that while the creamware glaze is tinted with copper oxide, the pearlware glaze is tinted with cobalt oxide. As a result, creamware has a yellowish appearance, but the cobalt has the effect of whitening the cream colored earthenware body of pearlware.

Unlike creamware, which is often undecorated or decorated with only molded relief patterns, pearlware received a wide variety of decorative treatments. The treatment is often hand-painted underglaze, either in blue (often oriental motifs) or in polychrome floral and geometric patterns. Transfer-printing is also common. The technique involved engraving a plate with the desired pattern and printing it on tissue paper. The paper was laid on the vessel, transferring the pattern to the piece. Blue transfer-printed pearlware is common from the late eighteenth into the second quarter of the nineteenth century.

Annular decoration is also common on pearlware. It consist of horizontal bands of colored slips on the vessel that often are found in conjunction with engine-turned pattern. Variants of annular decoration are mocha (brown fern-like motifs) and finger-painting (zones of swirled multi-colored slips). Blue and green shell-edged pearlware also are frequently recovered. These have molded, shell-like rims that are decorated with either blue or green hand-painting. Eighteenth century examples tend to be finely cast with individual brush strokes evident on the rim, while later sherds are less finely molded and painted. Not infrequently, the edge painting consists of only a broad band of blue or green (Sussman 1977).

Decorated pearlware was recovered from 16JE197 and 16JE214. Only annular, hand-painted and shell-edged pearlware was found. One sherd of undecorated pearlware was collected from both 16JE215 and 16JE216.

Stoneware. Stoneware paste ranges in color from white-gray or buff to deep gray and brown. Stoneware is fired at between 1200-1300 degrees, and it has a smooth and stony appearance (Rhodes 1973:22). Stoneware was first commercially produced in the United States ca. 1775. Use of these heavy, wheel thrown utilitarian vessels became widespread during the nineteenth century. Just as coarse earthenwares were the primary utilitarian ceramic of the eighteenth century, so were stonewares the principal utilitarian wares of the nineteenth century.

The most common surface treatment of stoneware is salt glazing. The raw ceramic is fired until the clay matures, at which point salt is added to the firebox. The vaporized salt is then deposited on the ware, producing a thin, bright, hard glaze with an orange-peel texture (Rhodes 1973:285). Salt glazed stoneware is often undecorated, or decorated with cobalt hand-painting. Three sherds of gray salt glazed stoneware with a brown exterior slip were collected from 16JE197.

Glass

Prior to the nineteenth century, the majority of glassware was hand-blown. Characteristics of hand-blown glass include the absence of mold seams and an asymmetrical vessel shape. Later, bottles were blown into a one piece dip-mold to form the vessel body, while the neck and shoulders were hand finished. This technique came into use during the later eighteenth century and continued to be utilized until the mid-nineteenth century.

Both hand-blown and molded bottles were held by a pontil during finishing. Attached to the vessel base, pontils left characteristic scars. One variant is the blow pipe pontil. The blow pipe pontil exhibits a rough ring of glass; it is produced by utilizing the blow pipe as the pontil rod. Thus, the molten glass from the neck creates the diagnostic scar on the base (Jones 1971).

During the eighteenth and nineteenth centuries, bottle lips were cut off with shears while the glass was still soft. These sheared lips are characterized by an abraded, plain cylindrical top. Frequently a bead of glass was laid on the neck beneath the lip of the vessel.

While glass was recovered from all of the sites, most sherds were small and none possessed diagnostic attributes. However, most sherds exhibited irregularities that suggests they derived from hand-blown vessels.

Nails

Generally, nails are only broadly datable. Prior to 1790, all nails were hand wrought. A variety of different wrought nails were manufactured. These can be defined by the shape of their heads (i.e. rose-headed, t-headed, l-headed, and headless).

Classification of nails was hampered by extreme corrosion. Ambiguous square nails were classified as such. However, all nails that could be positively identified were wrought.

RESULTS OF INVESTIGATIONS OF COLONIAL SITES

Site Definition of Spanish Colonial Building Sites

Spanish Colonial Building Sites 1, 3, 4, 5, and 6 as defined by Swanson (1988a:121-127) were relocated with the assistance of Mr. David Muth, Park Ranger at the Barataria Unit. Ms. Betsy Swanson assisted in the relocation of Spanish Colonial Building Site 2.

Each site was carefully examined for surface artifacts. A site datum was established, and shovel tests were excavated at 5 m intervals along two bisecting lines. This characterized horizontal extent of the subsurface cultural deposits in four directions. Horizontal definition along these lines was considered complete when a minimum of two sterile tests had been excavated in each of four directions. Additional shovel tests were excavated at five meter intervals along a grid off the original bisecting lines at 16JE197, 16JE214, 16JE198, 16JE199, and 16JE216, and along four rays from the datum at 16JE215 (see below). Horizontal definition along these lines was considered complete when one sterile test was excavated in each direction. Results of shovel test excavations provided information concerning horizontal extent of sites and depth of deposits present.

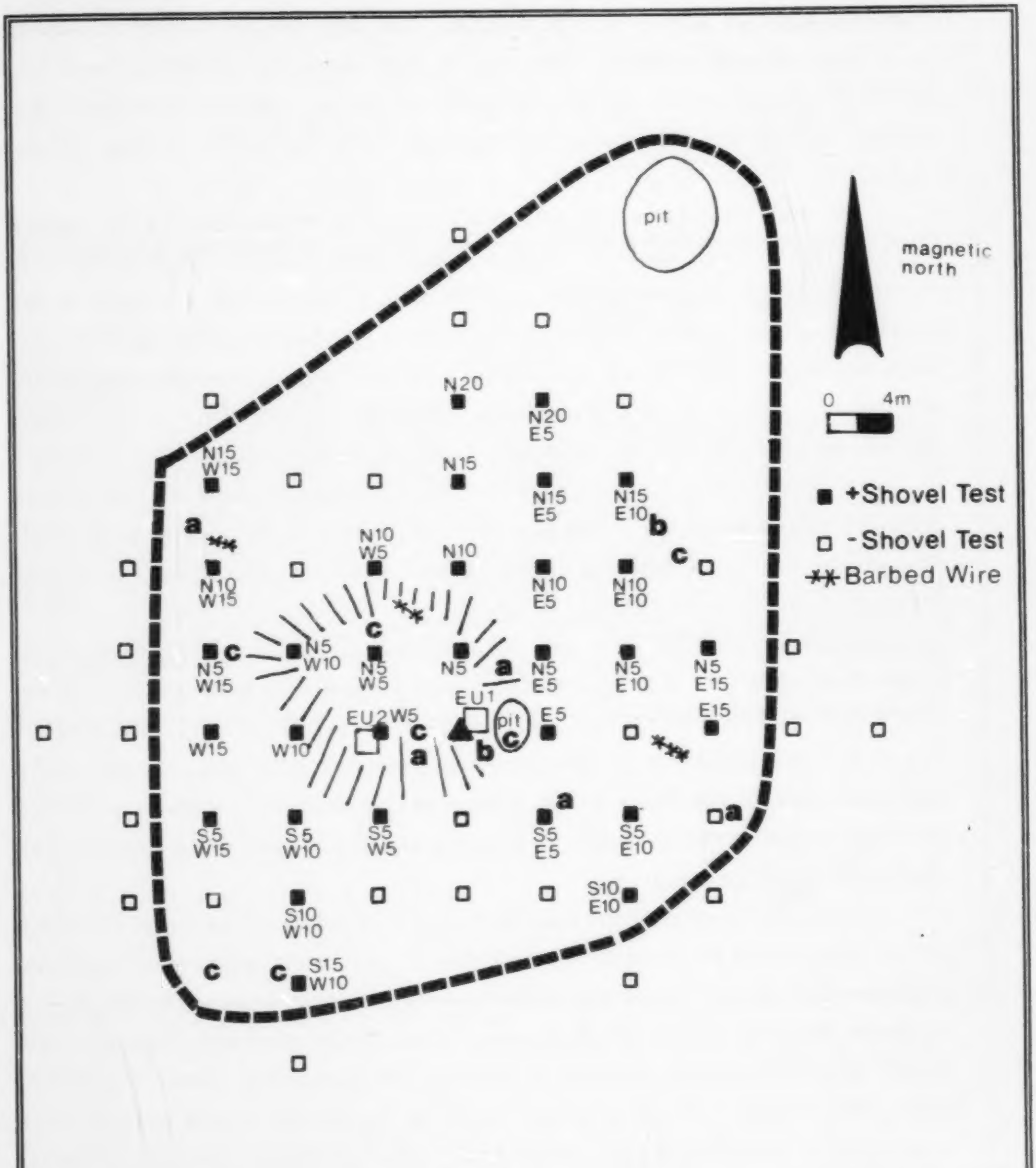
Shovel test dimensions for site definition were 30 x 30 cm, and they ranged from 30 to 50 cm depth. All soil excavated from shovel tests was screened through 1/4 inch mesh. Cultural materials recovered from shovel tests were placed in plastic zip-lock bags labelled with the site designation, the shovel test number, the excavator's initials, and the date.

One by one meter units were excavated at 16JE215, 16JE198, and 16JE199, two 1 x 1 m units were excavated at 16JE197 and 16JE216, and a 1 x 2 m unit was excavated at 16JE214. These were excavated in levels of 10 cm or less to sterile substrata. All excavated soil was screened through 1/4 inch mesh. Artifacts and faunal material were collected from each level and placed in plastic zip-lock bags labelled with the site designation, excavation unit designation, level number, depth, excavator's initials, and date. At least one profile of each excavation unit was drawn. Strata within each excavation unit were characterized according to soil type and Munsell color. A soil probe test was excavated in the floor of each completed unit to a depth of one meter in order to characterize underlying soils.

A map was prepared for each site using compass and tape. The maps depicted locations of shovel tests and excavation units, locations of surface scatters of artifacts, and locations of important natural and cultural features present.

16JE197 (Colonial Building Site 1)

This site was designated Colonial Building Site No. 1 by Swanson (1988a:122-123). Site dimensions are approximately 48 m N/S and 38 m E/W at its maximum extent (Figure 5). An earth mound, approximately .7 m in height, is located in the west-central portion of the site. The mound measures


pit
magnetic north
0 4m
■ +Shovel Test
□ -Shovel Test
✱✱ Barbed Wire
N20
N20 E5
N15 W15
N15
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N15 E10
N10 W5
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N5 E10
N5 E15
EU1
EU2
W5
E5
E15
W15
W10
S5 W15
S5 W10
S5 W5
S5 E5
S5 E10
S10 W10
S10 E10
S15 W10
a
b
c

Figure 5. Site Map of 16JE197. Key: a) creamware; b) pearlware; c) brick.

approximately 14 m N/S and 16 m E/W. The apex of the mound is located in its northwestern quadrant. The mound slope is steepest on its northern side and most gradual on the southern side. Remnants of a barbed wire fence that marked the section line cross the site and skirt the northern edge of the mound.

A small oval depression is located immediately adjacent to the eastern edge of the mound. Its size suggests it may have resulted from a tree fall. A second, larger (approximately 6 m diameter) depression is located to the northeast of the mound (Figure 5). Swanson (1988a:121-122) suggested that such depressions, which are associated with the majority of the sites under discussion, may represent borrow pits for the construction of the house mounds and/or for making *bousillage* (daub; mud and moss used for wall fill).

A 1 x 1 m unit was excavated on the eastern slope of the mound adjacent to the small pit. The unit was excavated in 10 cm arbitrary levels to a depth of 40 cm below surface. Soils were screened through 1/4 inch mesh.

A profile of the east wall of this unit is shown in Figure 6. Two strata were observed. The uppermost, which extended to between 20 to 35 cm below surface, was a 10YR 4/1 (dark gray) silty clay. Below this was a 10YR 5/1 (gray) and 10YR 5/4 (yellowish brown) mottled silty clay. A soil probe test excavated in the floor of the unit revealed that this stratum continued to 75 cm below surface. Below this was a 10YR 5/4 (yellowish brown) silty clay with hematite staining.

Artifacts were recovered between 0 and 25 cm below surface, and these were concentrated between 0-20 cm (Table 1). Artifacts included creamware, lead glazed redware, a kaolin pipestem, a gunflint fragment, brick, and a probable daub or *bousillage* fragment. One square, probably wrought nail shaft fragment was recovered, as well as unidentifiable metal fragments. Also, four fragments of a small bowl of Saintonge green glazed buff earthenware were found in Levels 1 and 2 (0-20 cm below surface). Finally, although sherds of modern, clear bottle glass were recovered from Levels 1-3 of the unit, this does not necessarily suggest disturbance of the area. Similar sherds were noted on the surface in the vicinity of the unit. Because the unit was located on the mound slope, it is likely that they were buried by surface

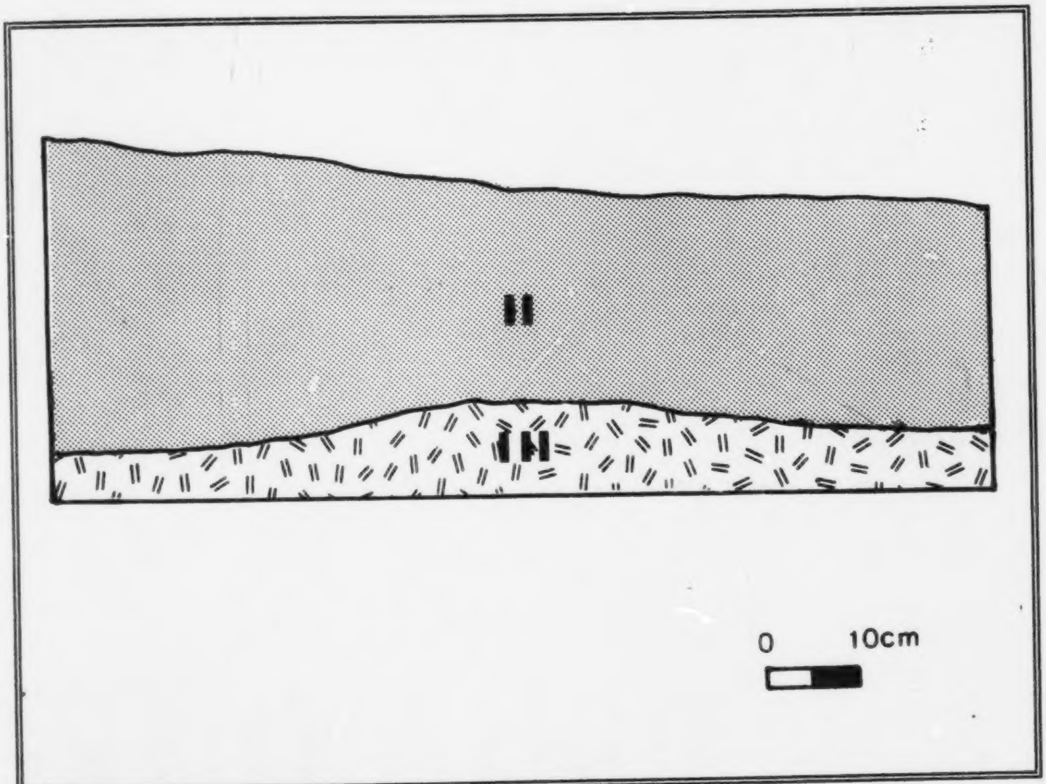

II
III
0 10cm

Figure 6. Profile of the east wall of EU1, 16JE197.

Table 1. Materials Collected from 16JE197.

	Surf	N5	N10	N15	N20	N0 E5	N5 E5	N10 E5	N15 E5	N20 E5	N5 E10	N10 E10	N15 E10
Saintonge green glazed buff earthenware													
Lead glazed redware		1		1									
Redware, interior lead glaze								1					
Manganese glazed redware													
Redware, interior red slip with white trailed slip and interior lead glaze													
Redware, eroded glaze													
Gray salt glazed stoneware, brown exterior slip													
Faience													
Creamware	5								1				2
Annular creamware													
Pearlware	2								1				
Blue hand-painted pearlware													
Polychrome hand-painted pearlware				3		1							
Blue shell-edged pearlware													
Bell Plain var. St. Catherine								1					

Table 1, Continued.

	Surf	N5	N10	N15	N20	N0 E5	N5 E5	N10 E5	N15 E5	N20 E5	N5 E10	N10 E10	N15 E10
Clear glass													
Dark green blown glass		1											
Light green glass					1								
Bone button													
Brass button													
Buckle													
Pipestem													
Pipebowl													
Flint block													
French gunflint													
British gunflint													
Flint flakes													
Lead frag.													
Headless nail													
L-head nail													
T-head nail													
Misc. square nail				4								1	
Square nail shaft				3	1		1			1	1	1	
Axe head													
Misc. metal				2					1				
Brick frag.*	645.2	1.6	16.2	50.0		4.7				8.4	.8		
Daub frag.*					4.0								
Daub/brick frag*													
Burned daub*								.6					
Charcoal*													
Bone*											.3		
Rangia													

* Weight in grams

Table 1, Continued.

	N0 E15	N5 E15	N0 W5	N5 W5	N10 W5	N0 W10	N5 W10	N0 W15	N5 W15	N10 W15	N15 W15	S5 E5	S5 E10	S10 E10
Saintonge green glazed buff earthenware														
Lead glazed redware														
Redware, interior lead glaze											1			
Manganese glazed redware														
Redware, interior red slip with white trailed slip and interior lead glaze						1								
Redware, eroded glaze								1						
Gray salt glazed stoneware, brown exterior slip														
Faience														
Creamware	2									1				
Annular creamware														
Pearlware			1						1					
Blue hand-painted pearlware									1					
Polychrome hand-painted pearlware			2		1									
Blue shell-edged pearlware														
Bell Plain var. St. Catherine														

Table 1, Continued.

	N0 E15	N5 E15	N0 W5	N5 W5	N10 W5	N0 W10	N5 W10	N0 W15	N5 W15	N10 W15	N15 W15	S5 E5	S5 E10	S10 E10
Clear glass														
Dark green blown glass										1		1	2	1
Light green glass														
Bone button														
Brass button														
Buckle														
Pipestem														
Pipebowl														
Flint block			1											
French gunflint														
British gunflint														
Flint flakes														
Lead frag.														
Headless nail													1	
L-head nail														
T-head nail														
Misc. square nail														
Square nail shaft														
Axe head			1											
Misc. metal														
Brick frag.*	60.4	14.1		217.9					5.7	74.8				
Daub frag.*										2.8				
Daub/brick frag.*							1.4			1.0	.9			
Burned daub*														
Charcoal*														
Bone*			5.1	.1										
Rangia														

* Weight in grams

Table 1, Continued.

	S5 W5	S5 W10	S10 W10	S15 W10	S5 W15	EU1 L1	EU1 L2	EU1 L3	EU2 L1	EU2 L2	EU2 L3	Total
Saintonge green glazed buff earthenware						2	2					4
Lead glazed redware												2
Redware, interior lead glaze		1						1	1			5
Manganese glazed redware									2			2
Redware, interior red slip with white trailed slip and interior lead glaze												1
Redware, eroded glaze												1
Gray salt glazed stoneware, brown exterior slip									1	2		3
Faience		1										1
Creamware	1						2		26	2		42
Annular creamware									1			1
Pearlware					2				2			9
Blue hand-painted pearlware									1	10		12
Polychrome hand-painted pearlware									1			8
Blue shell-edged pearlware									7			7
Bell Plain *var. St. Catherine*												1

Table 1, Continued.

	S5 W5	S5 W10	S10 W10	S15 W10	S5 W15	EU1 L1	EU1 L2	EU1 L3	EU2 L1	EU2 L2	EU2 L3	Total
Clear glass						2	5	1				8
Dark green blown glass									1			7
Light green glass												1
Bone button									1			1
Brass button										1		1
Buckle										1		1
Pipestem						1			2			3
Pipebowl											1	1
Flint block												1
French gunflint									1			1
British gunflint						1			1	1		3
Flint flakes									2			2
Lead frag.												1
Headless nail										1		1
L-head nail									3			4
T-head nail									4	1		5
Misc. square nail									9		1	15
Square nail shaft	1								22	2	1	30
Axe head												1
Misc. metal						2		1	9	1		16
Brick frag.*	8.5	101.4	.4	382.6			.3	8.1	489.0	53.9	86.7	2230.3
Daub frag.*								.7	204.8	19.6		231.9
Daub/brick frag.*				13.2						4.2		20.7
Burned daub*									51.6	12.6		64.8
Charcoal*							.1		2.7	1.2		4.0
Bone*							.1		109.8	8.2		123.6
Rangia									4			4

* Weight in grams

erosion.

A 3 liter sample of soil was collected from the culture-bearing stratum for wet screening through nested 1/4" and 1/16" screens. As shown in Table 2, brick was collected from the 1/4" mesh, while brick, daub, charcoal, floral remains, and faunal remains were recovered from the 1/16" mesh.

A second 1 x 1 m unit was excavated adjacent to a particularly rich shovel test, W5 (Figure 5). This shovel test yielded faunal material, three pearlware sherds, a French or Spanish felling ax blade broken at the eye (Morrel 1965:39), and a large fragment of black English flint from which flakes had been removed but which still had some cortex. Again, the second unit was excavated in arbitrary 10 cm levels to a depth of 30 cm below surface. Excavated soils were screened through 1/4" mesh.

A profile of the north wall of this unit is shown in Figure 7. The uppermost 10 cm of soil was a 10YR 3/1 (very dark gray) clay loam. Beneath this was a 10YR 4/1 (dark gray) silt clay to approximately 25 cm below surface. The lowest stratum was a 10YR 5/1 (gray) and 10YR 5/4 (yellowish brown) mottled silt clay (Figure 7).

Artifacts were recovered from 0 to 25 cm. No artifacts were recovered from the lowest stratum (Table 1). Ceramics (Figure 8) included lead glazed redware, manganese glazed redware, gray salt glazed stoneware with an exterior brown slip, undecorated pearlware, and polychrome hand-painted pearlware. Twenty-eight sherds of creamware were recovered, including a pitcher spout fragment. Also, the majority of a small, finely cast and painted blue shell-edged pearlware plate and a blue hand-painted pearlware saucer with an oriental motif were found. Architectural debris included numerous wrought nails and nail fragments, brick, daub (*bousillage*), and burnt daub.

Clothing remains included a fragment of a single-hole bone button, a small brass button, and a badly corroded piece of metal which appears to have been a shank-type button. The single-hole bone disc button was a common type in the eighteenth and nineteenth centuries; examples have been recovered at Fort Michilimackinac from contexts dating to 1750-1770, at Brunswick Town from contexts dating to 1726-1830, and at Fort Fisher from contexts dating to 1837-1865 (South 1964:119). The brass button consists of a flat disc measuring 13 mm in diameter with a soldered wire eye. The back is stamped

Table 2. Material Recovered from Water Screening 3 Liters of Soil Collected from Excavation Unit 1, 16JE197.

1/4 Inch Mesh	
Brick	0.2 gram
1/16 Inch Mesh	
Seed Hull	1
Seeds	1
Bone	<0.1 gram
Brick	(present)
Charcoal	(present)
Daub	(present)

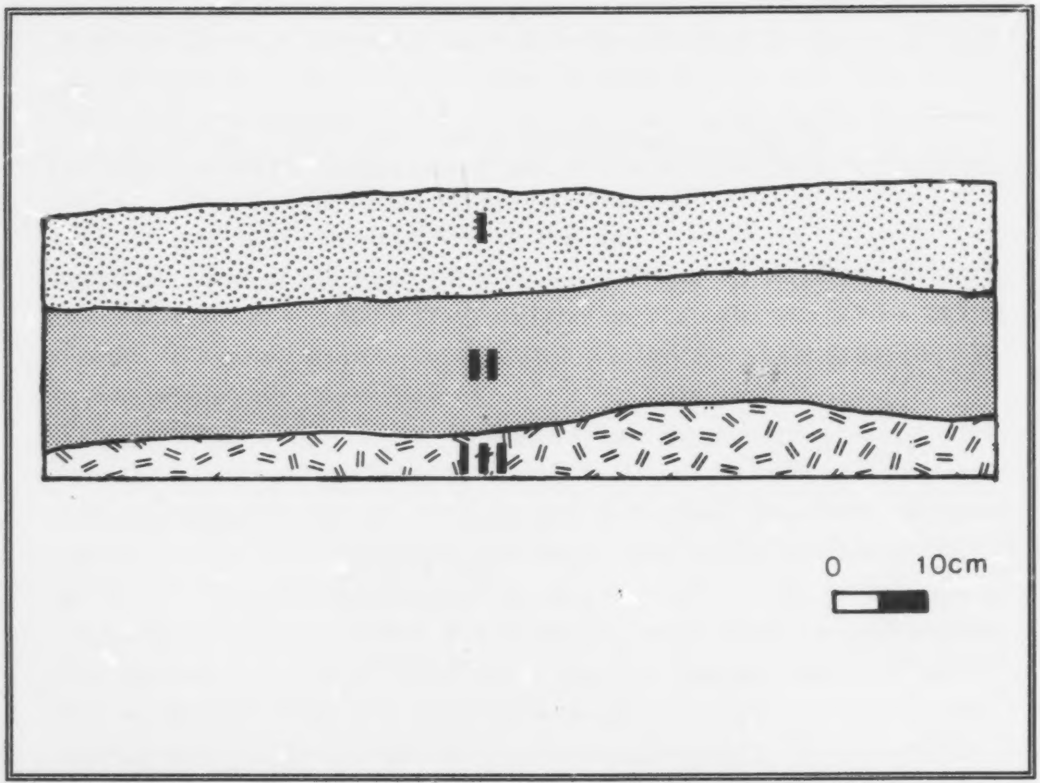

I
II
III
0
10cm

Figure 7. Profile of the north wall of EU2, 16JE197.

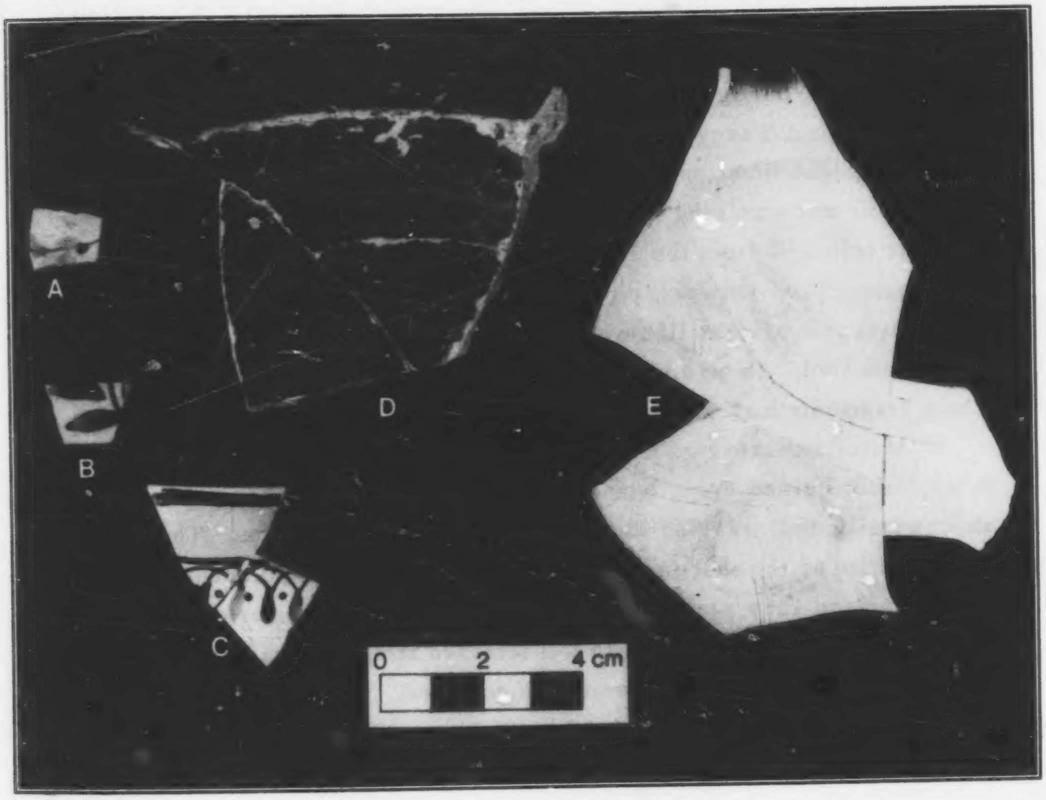


Figure 8. Ceramics from 16JE197. Key: A-C) polychrome hand-painted pearlware (Shovel tests W5 and N15); D) Saintonge green glazed buff earthenware (EU1, Levels 1 and 2); E) blue shell-edged pearlware (EU2, Level 1).

"STRONG GILT HOH." Buttons of this type have been found in contexts dating to 1800-1865 (South 1964:120-121). Another artifact resembles a small two-tined buckle which may been a knee buckle. Other materials included blown glass, pipe fragments, charcoal, and *Rangia* (clam) shells.

In addition, the remains of armaments were recovered from Excavation Unit 2. Gunflints manufactured from both French and English flint were collected, as well as flint flakes. The latter, in combination with the flint block collected in Shovel Test W5, indicate that the site's residents were knapping their own gunflints. Finally, the presence of a lead fragment in Excavation Unit 2 suggests that ammunition was manufactured on the site.

An eight liter sample of soil was collected from the culture-bearing stratum for wet screening through nested 1/4" and 1/16" screens. Additional artifacts collected from the 1/4" mesh (Table 3) included annular pearlware, manganese glazed redware, pipebowl fragments, a bottle lip, nails and nail fragments, and unidentifiable metal. Bone, daub, charcoal, and brick also were recovered. In addition, two fragments of sandstone were collected. These fragments may have been used for grinding and/or abrasion.

Materials recovered in the 1/16" screen (Table 3) included glass, metal, brick, daub, burned daub, burned *Rangia*, and charcoal. Six pieces of lead shot were found, ranging in size from 3 mm to 7 mm. The surface irregularities of the shot indicates that they were contemporaneous with site occupation,and they probably derived from animal carcasses disposed of in the midden. As was the case with wet screened samples from Excavation Unit 1, faunal and floral remains were also collected.

One aboriginal sherd of Addis Plain *var. St. Catherine* was collected during shovel testing (Table 1). This sherd was recovered from Shovel Test N15 E5 in the north east corner of the site (Figure 5).

Analysis of materials recovered during shovel testing suggests spatial patterning of architectural debris (brick, daub, and nails). All positive shovel tests located along the N5 line (Figure 5) yielded architectural remains. This line bisects the mound along its east/west axis. Additional architectural materials were clustered to the northeast of the mound and west of the mound along the W15 line (Figure 5). These materials may represent the remains of a structure which formerly stood on the mound.

Table 3. Material Recovered from Water Screening 8 Liters of Soil Collected from Excavation Unit 2, 16JE197.

1/4 Inch Mesh

Annular Pearlware	1
Manganese Glazed Redware	1
Dark Green Bottle Lip; Sheared, Laid on Bead	1
Pipebowl	2
Misc. Square Nail	1
Square Nail Shaft	2
Misc. Metal	1
Sandstone	2
Brick	6.5 grams
Daub	7.3 grams
Charcoal	3.9 grams
Bone	6.0 grams

1/16 Inch Mesh

Light Green Glass	1
Lead Shot	6
Seed Membrane	1
Bone	1.3 grams
Burned Rangia	0.3 gram
Metal	(present)
Brick	(present)
Charcoal	(present)
Daub	(present)
Burned Daub	(present)

Another cluster of positive shovel tests containing architectural debris was located to the southwest of the mound. The highest concentration of brick in this area was located in Shovel Test S15 W10 (Figure 5). This shovel test was located in the center of a fairly dense surface scatter of brick fragments. It is possible that this represents the remains of an outbuilding. The absence of domestic debris in this area supports a non-residential function for such a structure.

Both surface and subsurface domestic debris was fairly evenly distributed across the site north of the S5 line (Figure 5). The exception to this was the high concentration of materials in Shovel Test W5 and Excavation Unit 2. This concentration suggests that this was an area of secondary refuse disposal for the site's inhabitants. If indeed the residence was located on the mound, then it is likely that this locale represents an adjacent secondary refuse disposal area (South 1977:47-50), probably at the location of a doorway to the structure. The remainder of the domestic debris at the site likely represents tertiary dispersal of refuse through the action of animals, etc.

Both surface and subsurface artifact density was among the heaviest seen at the colonial sites. In addition, the artifacts represented an impressive range of functional types. The present investigations suggest patterning of artifactual remains which may yield important behavioral information on the site's inhabitants. On the basis of the pristine nature of this site, the rich cultural deposits, and the rarity of colonial period sites in this region of Louisiana, it is recommended that 16JE197 be nominated for inclusion on the National Register of Historic Places.

16JE214 (Colonial Building Site 2)

This site was designated Colonial Building Site No. 2 by Swanson (1988a:123-125). Site dimensions are approximately 32m N/S and 36 m E/W. Two immediately adjacent mounds, separated only by a slight depression, occupy the central portion of the site. Each of these mounds is approximately 10 m in diameter, and they are approximately .5 m high (Figure 9). On the northern portion of the western mound is a crescent-shaped depression. This

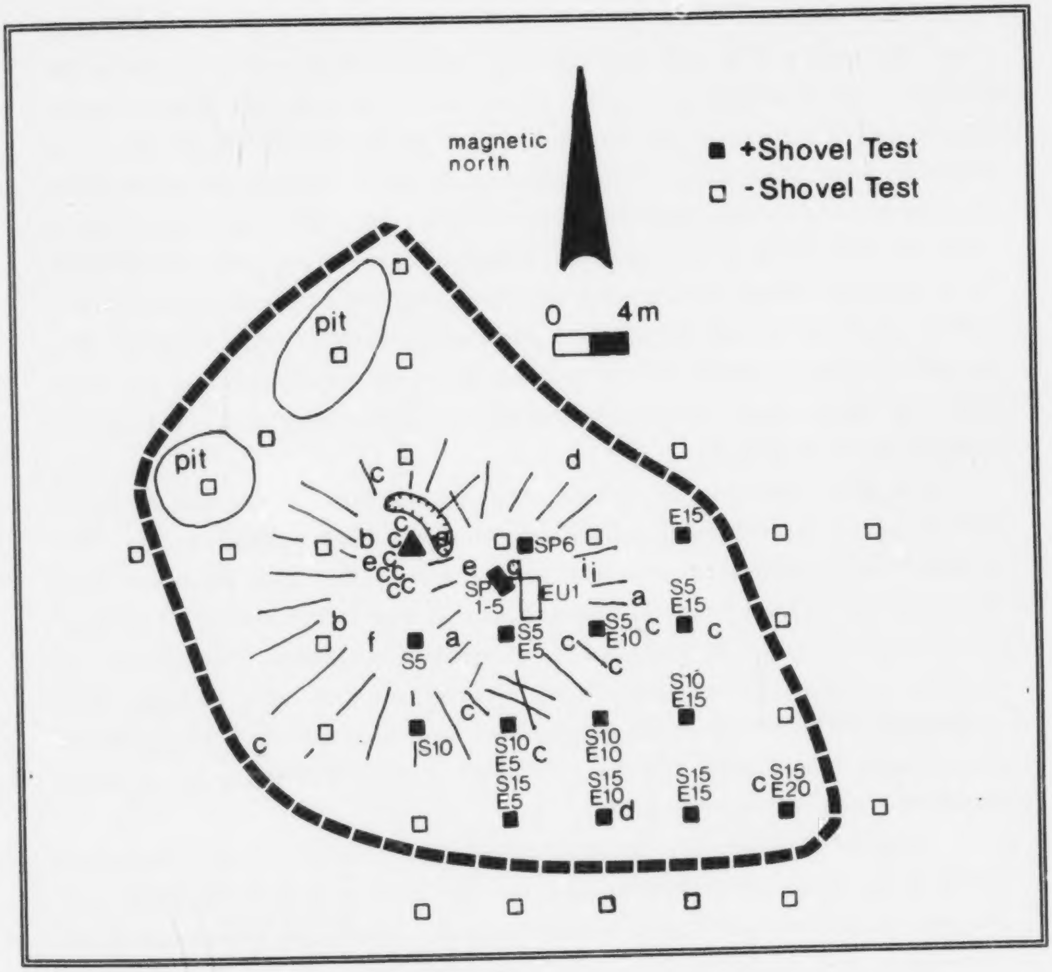

magnetic north
■ +Shovel Test
□ -Shovel Test
0 4m
pit
pit
SP6
SP 1-5
EU1
E15
S5 E15
S5 E10
S5 E5
S5
S10 E15
S10
S10 E5
S10 E10
S15 E5
S15 E10
S15 E15
S15 E20
a
b
c
d
e
f
g
i

Figure 9. Site Map of 16JE214. Key: a) polychrome hand-painted pearlware; b) faience; c) creamware; d) pearlware; e) glass; f) 1 blue shell-edged pearlware, 2 polychrome hand-painted pearlware, 1 pearlware, and 1 creamware; g) unglazed buff earthenware; h) modern porcelain; i) brick.

probably represents a tree fall. To the northwest of the mounds are two pits or depressions. The northern pit is 10 m long and 4 m wide, and the southern pit is approximately 4 m in diameter (Figure 9). Shovel tests provided no information on the nature or function of these pits.

The majority of the ceramics collected from the site were recovered from the surface (Figure 9 and Table 4). Most of these were creamware (18 sherds). Undecorated pearlware (four sherds) polychrome hand-painted pearlware (four sherds), and blue shell-edged pearlware (one sherd) also were collected from the surface. The only two sherds of faience recovered from the site were collected from the surface (Figure 10). Other surface material included one sherd of unglazed buff earthenware which probably derived from a storage vessel, dark green blown glass, one sherd of modern clear glass, and a sherd of relatively modern porcelain. Most of this material was recovered from the surface of the mound, and, with the exception of the clear glass and the porcelain sherd, undoubtedly represents domestic debris from the site's former inhabitants.

A small collection of surface artifacts was made at the site by Betsy Swanson prior to archaeological investigations (Swanson 1988a:124-125). The artifacts were recovered adjacent to the tree fall. The collection was examined by Charles Pearson, George Castille, and David Kelley of Coastal Environments, Inc. It included five creamware sherds, two sherds of hand-blown glass, a gunflint, brick fragments, and two wrought nail fragments. Three sherds of crude, unglazed light brown pottery which do not appear to be Indian-made also were collected (Charles Pearson et al., personal communication to Swanson 1988).

Despite a relatively dense surface scatter of artifacts, subsurface cultural deposits were diffuse at this site, and concentrated to the south and the east of the mound (Figure 9 and Table 4). Therefore, placement of an excavation unit at the location of a subsurface artifact concentration was problematic. Instead, a 1 x 2 m unit was excavated at the location of a partially exposed, intact brick feature on the easternmost of the two mounds. The unit was placed to expose the feature, which extended east-west, in its entirety, as well as to provide coverage of areas immediately to the north and south of the feature.

Table 4. Materials Collected from 16JE214.

	Surf	N0	E15	S5	S5 E5	S5 E10	S5 E15	S10	S10 E5	S10 E10	S10 E15	S15 E5	S15 E10
Lead glazed redware		1											
Redware, interior lead glaze													
Unglazed buff earthenware	1												
Faience	2												
Creamware	16	2	1	1			1				1	1	2
Pearlware	4												
Polychrome hand-painted pearlware	4												
Blue shell-edged pearlware	1												
Modern porcelain	1												
Clear glass	1												
Dark green blown glass	2				2								
Brown glass													
Brass button													
Pipestem								1					

Table 4, Continued.

	Surf	NO	E15	S5	S5 E5	S5 E10	S5 E15	S10	S10 E5	S10 E10	S10 E15	S15 E5	S15 E10
Wrought nail													
Rose hesd nail													
Headless nail													
L-head nail													
T-head nail													
Misc. square nail				1		1							
Square nail shaft						2							
Axe head													
Misc. metal					2			6					
Brick frag.*	306.9			3.8				.7					3.0
Daub frag.*					.4			1.6					
Mortar*													
Charcoal*						.4							
Bone*												.2	

* Weight in grams

Table 4, Continued.

	S15 E15	S15 E20	SP1	SP2	SP3	SP4	SP5	SP6	EU1	Total
Lead glazed redware										1
Redware, interior lead glaze			1							1
Unglazed buff earthenware										1
Faience										2
Creamware					3	2	1			31
Pearlware										4
Polychrome hand-painted pearlware										4
Blue shell-edged pearlware										1
Modern porcelain										1
Clear glass										1
Dark green blown glass					1				4	9
Brown glass									1	1
Brass button									1	1
Pipestem									1	2

Table 4, Continued.

	S15 E15	S15 E20	SP1	SP2	SP3	SP4	SP5	SP6	EU1	Total
Wrought nail									1	1
Rose head nail									1	1
Headless nail									5	5
L-head nail									1	1
Misc. square nail		1							13	16
Square nail shaft		2			1				16	21
Axe head								1		1
Misc. metal						1				9
Brick frag.*	19.4					9.0			599.0	938.8
Daub frag.*			.2			9.1			642.1	653.4
Mortar									135.8	135.8
Charcoal*			.5			.4			3.5	4.8
Bone*						1.3			24.6	26.1

* Weight in grams

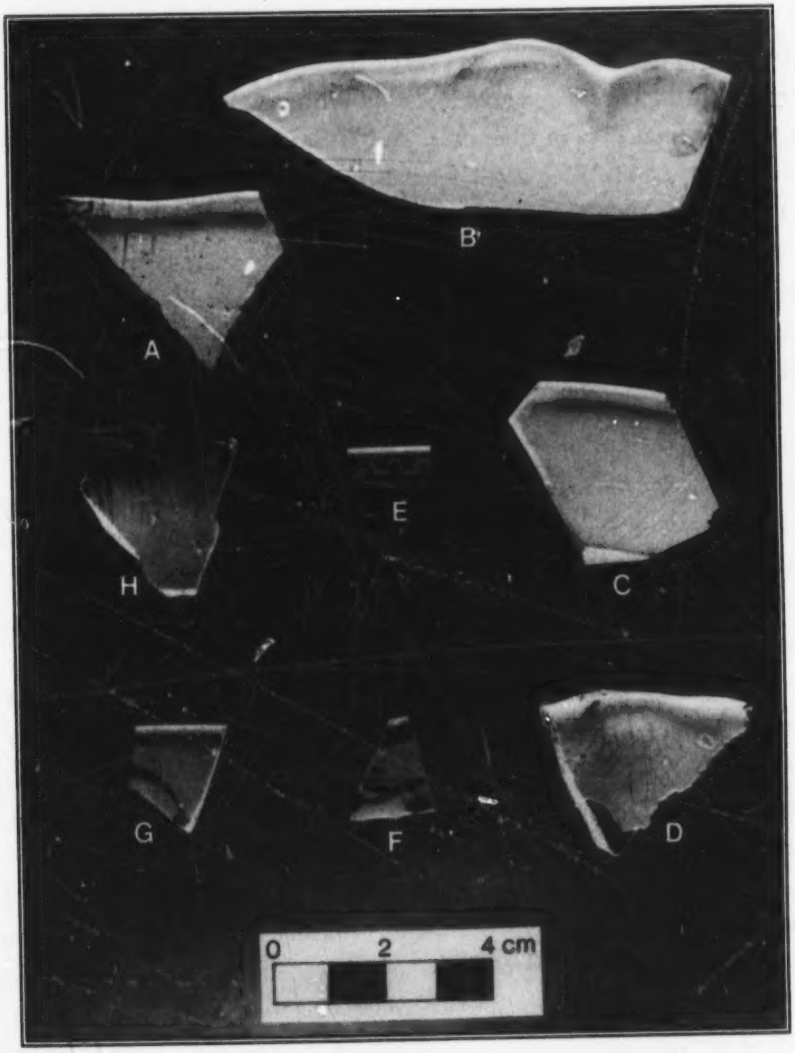


Figure 10. Ceramics from 16JE214. Key: A-C) creamware (Shovel Probe 2 and Surface); D) fiaence (Surface); E-G) polychrome hand-painted pearlware (Surface); H) blue shell-edged pearlware (Surface).

Initially, the feature was cleared of overburden. Brick fragments, nails, mortar and daub were recovered during this process. In addition, one kaolin pipestem fragment and one brass button with silver leaf decoration were found. The latter was recovered from directly on top of the brick feature, and was partial covered by daub (Figure 11). The flat disc of the button measures 21 mm in diameter, and it has a soldered wire eye. Buttons of this type have been recovered from Brunswick Town from contexts dating 1726-1776 (South 1964:118).

Excavation of this unit was designed to document the construction sequence while at the same time maximizing the preservation of the feature. Areas to the north and south of the feature were carefully trowelled, and artifacts were mapped as they were exposed (Figures 11 and 12).

The feature consisted of broken brick, one brick course in depth. Depth of the top of the bricks ranged from 2 cm above surface in the west central portion of the feature, to 9 cm below surface in the eastern portion of the feature. The feature measured approximately 1 m in length and .4 m in width.

The area to the north of the feature was excavated to 15 cm depth. Materials recovered from this area included wrought nails, glass, brick, daub, mortar, charcoal, and bone. The majority of artifacts were recovered from the uppermost stratum of 10YR 3/2 (very dark grayish brown) silty clay, which extended to 10 cm below surface. Beneath this was a stratum of 10YR 4/1 (dark gray) silty clay (Figure 13), which yielded only brick and daub fragments.

A concentration of daub was located on the north side of the bricks adjacent to the west central portion of the feature (Figure 11). The daub was 10YR 5/6 (yellowish brown) in color, and it extended from 3 to 9 cm below surface. When this concentration was removed, it was found that the daub extended under the bricks for the majority of the feature's length (Figure 13). Thus, the bricks were laid into the daub, which probably served to hold the bricks in place.

The area south of the feature was initially excavated to 1 cm depth. This revealed a 10YR 3/2 (very dark grayish brown) silty clay which was flecked with daub and mortar. The stratum contained wrought nails, bone,

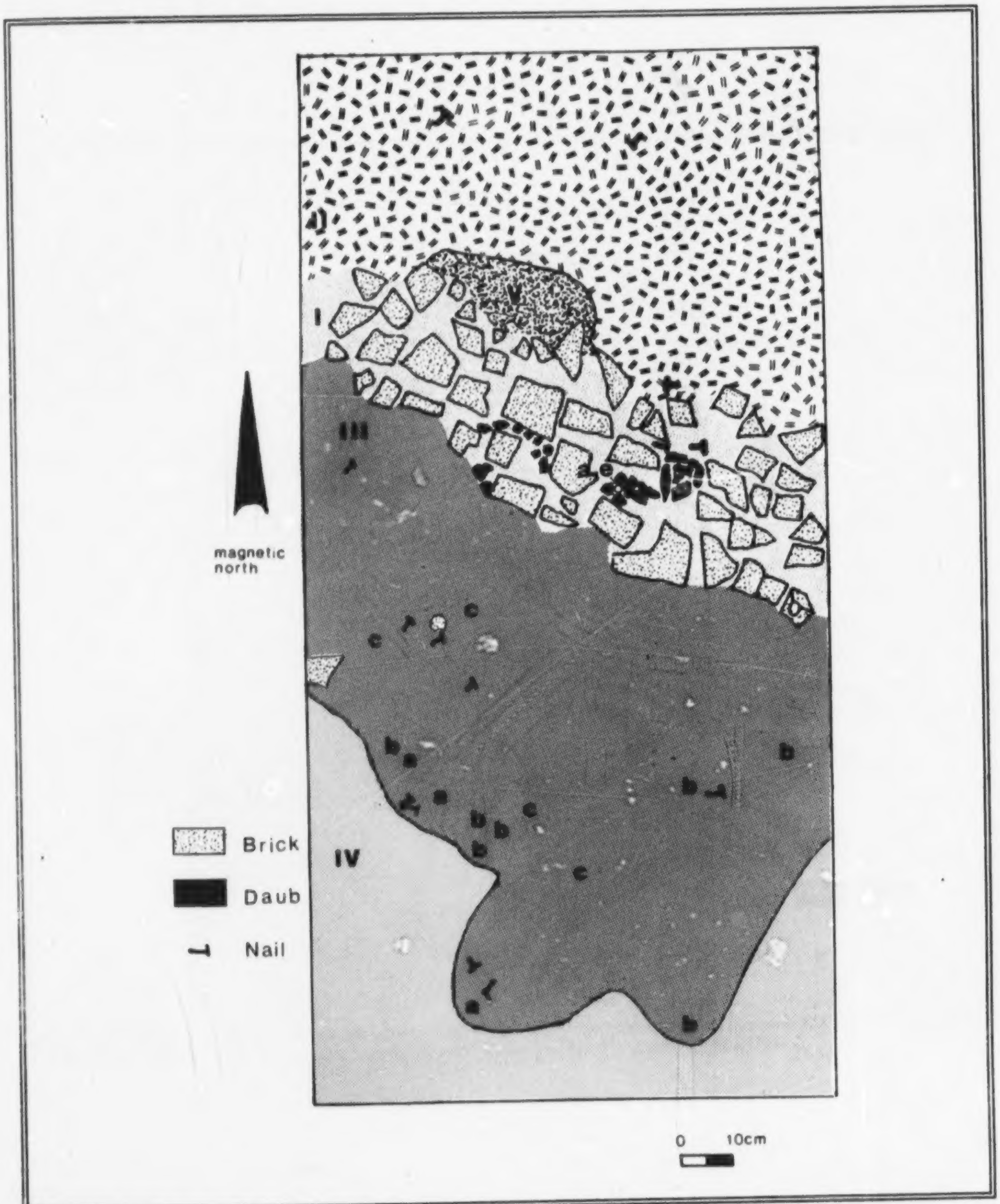

I
III
IV
magnetic north
Brick
Daub
Nail
0 10cm

Figure 11. Plan view of EU1, 16JE214.

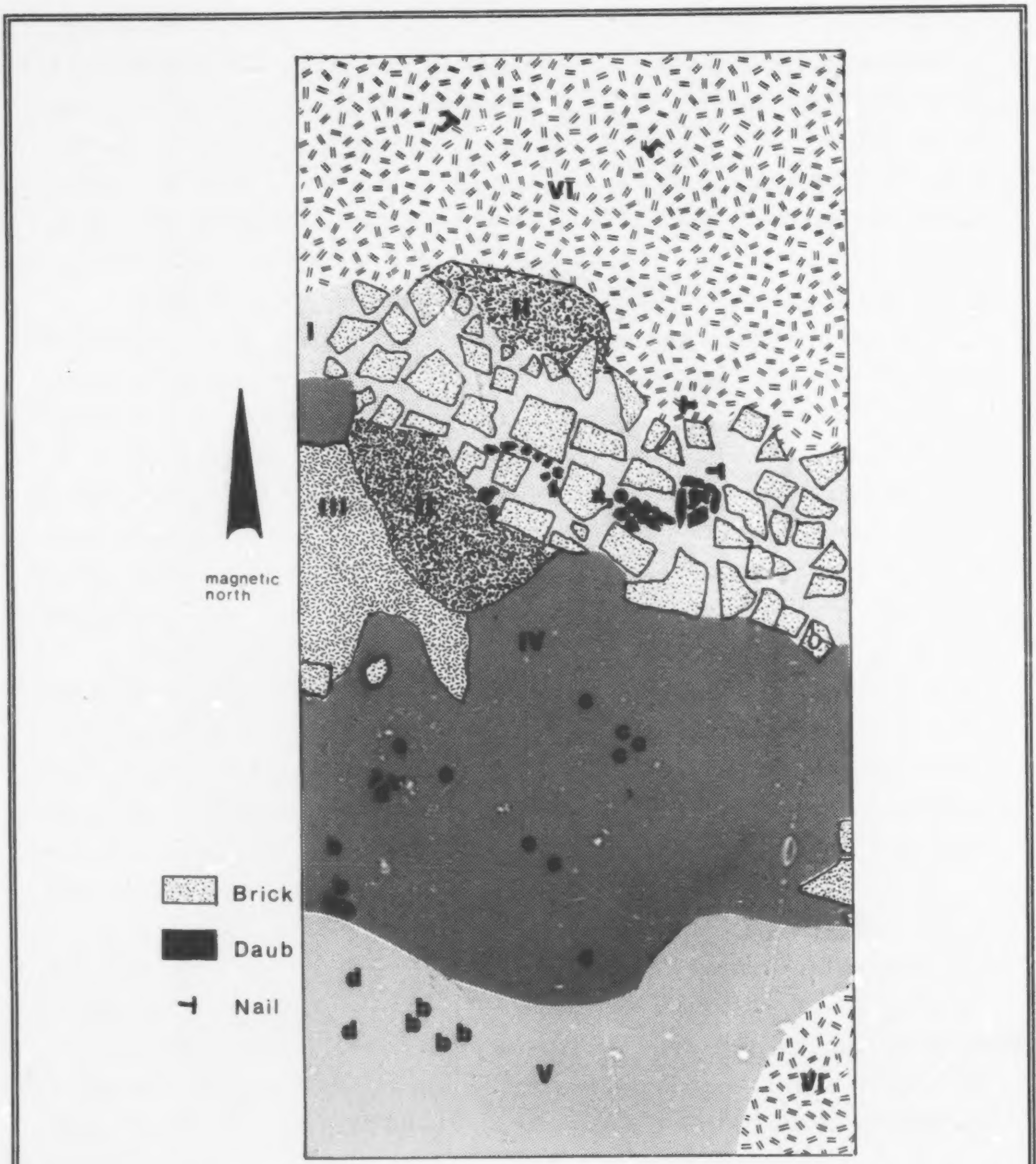

VI
II
I
III
II
IV
V
VI
d
d
b
b
b
b
magnetic
north
Brick
Daub
Nail
0
10cm

Figure 12. Plan view of EU1, 16JE214, showing remains of mud floor.

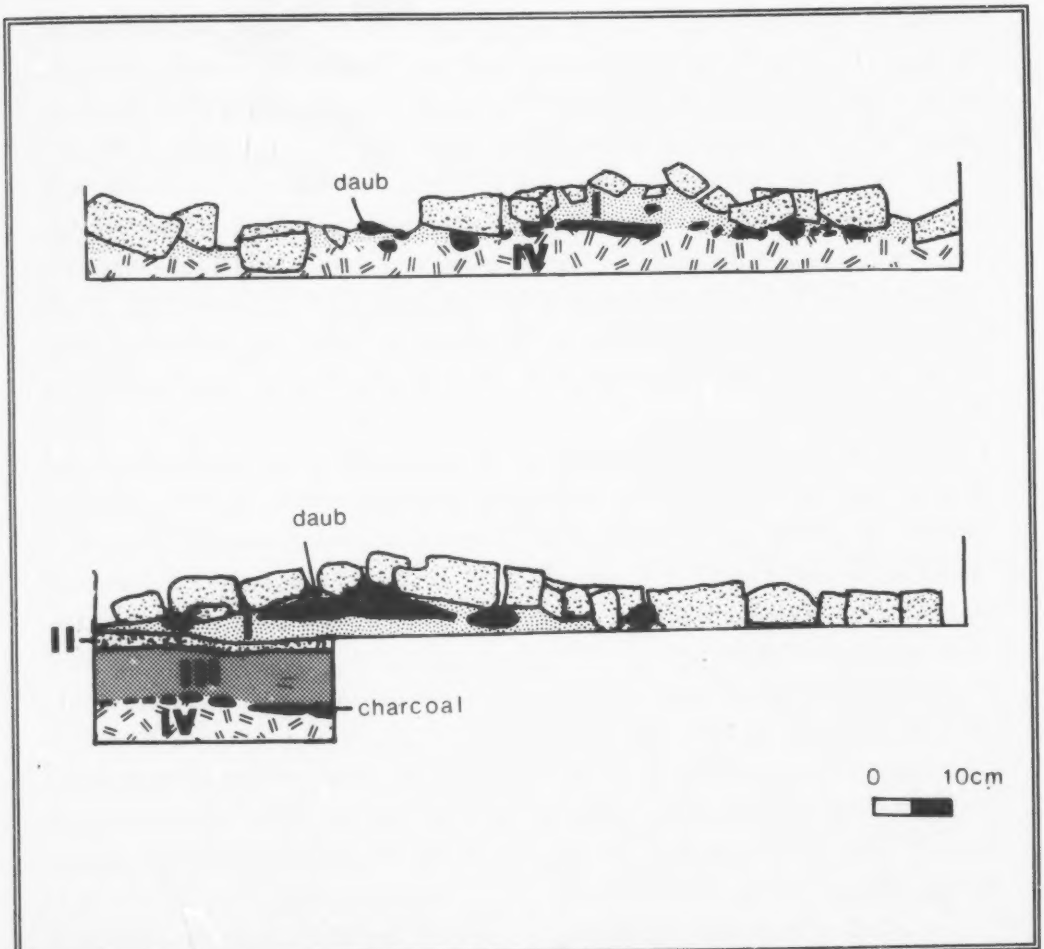

daub
I
IV
daub
II
III
IV
charcoal
0
10cm

Figure 13. Profiles of the north and south exposures of Feature 1, 16JE214.

brick, and glass. As shown in Figure 11, this daub and mortar flecked zone did not extend for the entire length of the unit south of the feature.

The portion of the unit south of the feature was divided into three areas for subsequent excavation: 0-30 cm south, parallel to the feature; 30-60 cm south, parallel to the feature; and beyond 60 cm south, parallel to the feature. These areas were then excavated by troweling to a depth of 10 cm below surface. Soil was collected from each of these areas for laboratory water screening through 1/4" and 1/16" mesh.

As shown in Table 5, larger brick fragments were only recovered from the 0-30 cm area, although tiny fragments were present in all of the samples. Daub was also concentrated in the 0-30 cm area. Nails and nail fragments were recovered from both the 0-30 cm and the 60+ cm areas, and 1/16" screening yielded shot from the 30-60 cm area. Small fragments of bone, daub, burnt daub, mortar, metal, and charcoal also were present in all three areas.

A daub concentration mirroring the one noted on the north side of the feature was uncovered at 3 cm depth, and it extended to 10 cm below surface (Figure 12). This concentration was removed in its entirety for laboratory water screening through 1/4" and 1/16" mesh. Large fragments of daub and mortar were recovered. Bone, brick, and charcoal also were present in the concentration (Table 5).

The remains of a hardened clay floor were uncovered at 10 cm below surface adjacent to the southwest portion of the feature (Figure 12). The floor was 1-2 cm in thickness. Removal of the daub concentration (above) demonstrated that the floor extended underneath the daub. This indicates that the floor was prepared and allowed to harden prior to the construction of the superstructure.

A 30 x 30 cm area immediately south of and adjacent to the floor was excavated. At 12 cm below surface, additional remains of the floor were uncovered. This suggests that additional portions of the floor may be preserved under the unexcavated portions of the unit south of the feature. The unit was reduced to 15 x 30 cm and excavated to a depth of 25 cm below surface. Excavated soil was water screened through 1/4" and 1/16" mesh in the laboratory.

Table 5. Material Collected from Water Screening Soil from Excavation Unit 1, 16JE214.

1/4" mesh	0-30S 1-5cm (6 1)	30-60S 1-5cm (3 1)	60+S 1-5cm (3 1)	10-15cm (3 1)	15-20cm (3 1)	Daub Feat. (1 1)	Total
Wrought nail	4		1				5
Misc. metal		1					1
Brick*	2.4						2.4
Daub*	88.1	8.2	14.4	36.1	2.7	70.8	220.3
Mortar*	5.2		.5	.9		3.3	9.9
Charcoal*	.5	.2	.1	.9			1.7
Bone*	1.2		.5	.7			2.4

1/16" mesh	0-30S 1-5cm (6 1)	30-60S 1-5cm (3 1)	60+S 1-5cm (3 1)	10-15cm (3 1)	15-20cm (3 1)	Daub Feat. (1 1)	Total
Wrought nail	1		1				2
Square nail shaft			1				1
3mm shot		2					2
Bone*	2.6	.1	.6	.6	.1	.2	
Rangia	1		1				
Snail shell	5	2		1		1	
Brick	X	X	X	X		X	
Daub	X	X	X	X	X	X	
Mortar	X	X	X	X		X	
Burnt daub	X	X	X		X		
Metal	X	X	X				
Charcoal	X	X	X	X		X	

*Weight in grams

Beneath the hardened floor and extending to 18 cm below surface was a stratum of 10YR 4/3 (brown/dark brown) silty clay with 2.5YR 4/6 (red) mottling. This stratum contained daub, mortar, charcoal, bone, and brick. The majority of these cultural materials were collected from 10-15 cm below surface (Table 5). Underlying the clay was a thin (1 cm or less) lens of charcoal, which separated the mottled clay from a substratum of 10YR 4/1 (dark gray) silty clay (Figure 13). The charcoal appears to have been intentionally spread since the underlying clay showed no evidence of having been fired.

A metal probe was utilized to determine whether the brick feature extended beyond the confines of the excavation unit. Probing failed to indicate buried cultural remains east of the feature. However, a series of positive probes were located to the west and north of the excavation unit. Shovel probes (SP1-6) were excavated in these positive areas. No additional structural remains were found, but brick fragments, creamware, coarse earthenware, nails, glass, daub, charcoal, bone, and metal were recovered from these shovel probes (Table 4). In addition, an ax head was found north of the excavation unit. Like the ax from 16JE197, this was a French or Spanish felling ax broken at the eye.

These limited excavations have provided evidence concerning the construction sequence at the site. It appears that after the mound was built, a layer of charcoal was spread over the area where the structure was to be placed. This may have served as a simple form of waterproofing; the charcoal would have absorbed ground moisture to prevent its seeping upward to the floor. The mottled clay was then laid over the charcoal. Because the clay contained occupation debris (mortar, charcoal, bone, and brick), it suggests that this soil was obtained from an area that had been inhabited prior to construction of this building. This is strong evidence for a multiple construction sequence at the site. The adjacent western mound may be additional evidence of previous occupation, although the relatively small artifact assemblage precludes making temporal distinctions between the two mounds. However, shovel tests yielding artifacts were concentrated in the eastern portion of the site, which might be expected if the western mound was built first and only briefly occupied.

Because the feature did not appear to extend beyond the limits of the excavation unit, interpretation remains problematic. It may have served as support for a post in the ground which was a portion of the house frame. The post may have stood in a roughly square area, approximately 9 x 9 cm, that was devoid of brick. This area was located in the south central portion of the feature, and daub was concentrated adjacent to this square. The two daub concentrations to the north and to the south of the feature approximately flanked this area (Figure 12). A squared log sill would have rested on top of the brick, and would have been tennoned to the upright post. It is unlikely that this was a support for a pier for a raised structure, or that it was a subsurface piling (Rick Fifield, personal communication 1989).

This interpretation suggests that the feature is a small, preserved portion of what was originally a continuous support of bricks underlying log sills. More extensive excavation is necessary to test this hypothesis. Specifically, additional work should be directed toward determining whether similar, small supports of brick or of other materials are preserved on the mound, and/or whether a more continuous portion of a sill support can be located. Also, the feature should be removed to determine whether a postmold is present in the squared area (Rick Fifield, personal communication 1989).

Spatial patterning of the subsurface cultural remains may suggest the presence of a second structure located to the southeast of the mound. Architectural debris consisting of brick and nails was concentrated in shovel tests S15 E10, S15 E15, and S15 E20. Creamware and pearlware were collected from both the shovel tests and from the surface in this area, suggesting that if a second structure was formerly located in this area, it probably had a residential function. As noted above, both surface and subsurface remains were concentrated on the mound and to the south and east of the mound, indicating that domestic activity was the highest in these areas.

16JE214 was the only site where intact, buried architectural features were discovered. These investigations attempted to minimize the impact to the feature in an effort to preserve it for additional study at a later date. It is possible that additional features are preserved at the site. On the basis of the pristine nature of this site, the importance of the structural remains, and the rarity of colonial period sites in this region of Louisiana, it is recommended that 16JE214 be nominated for inclusion on the National Register of Historic Places.

16JE215 (Colonial Building Site 3)

This site, designated Spanish Colonial Building Site No. 3 by Swanson (1988a:125), measures 26 m N/S and 34 m E/W at its maximum extent. A mound (approximately .75 m high) located in the central portion of the site, measures approximately 12 m in diameter. To the northwest of the mound is a depression or borrow pit similar to that on 16JE197. This pit measures approximately 10 m in length and 4 m in width (Figure 14). Examination of the site during February 1989 revealed the presence of a second, smaller and shallower pit located southwest of the mound. This pit measures approximately 6 m in length and 3 m in width (Figure 14).

Five sherds of lead glazed redware and one sherd of brown faience were found on the surface of the site. In addition, several large sherds of creamware and other material were found by Swanson (personal communication 1988) within an approximately 1 m2 area. Swanson gathered these together and placed them under a nearby log in an effort both to facilitate their relocation and to reduce the surface visibility of the site.

The site was defined using shovel tests at 5 m intervals along 8 equidistant rays extending out from the site datum (Figure 14). Artifacts recovered from shovel tests included Saintonge green glazed buff earthenware, lead glazed redware, creamware, blown glass, and daub (Table 6).

A 1 x 1 m unit was excavated in the southwest corner of the mound in the area of highest artifact density. The unit was excavated in arbitrary 10 cm levels to a depth of 20 cm. Because the cultural deposits appeared to extend to less than 20 cm below surface, and because the artifact density in Level 2 was extremely light, only the northeastern quadrant of the unit was excavated to 30 cm below surface. This final level proved to be sterile.

A profile of the north wall of this unit is shown in Figure 15. A 10YR 3/2 (very dark grayish brown) clay loam extended to approximately 5 cm below surface. Beneath this was a 10YR 5/2 (grayish brown) and 10YR 5/6 (yellowish brown) mottled silt clay. With the exception of an area of tree

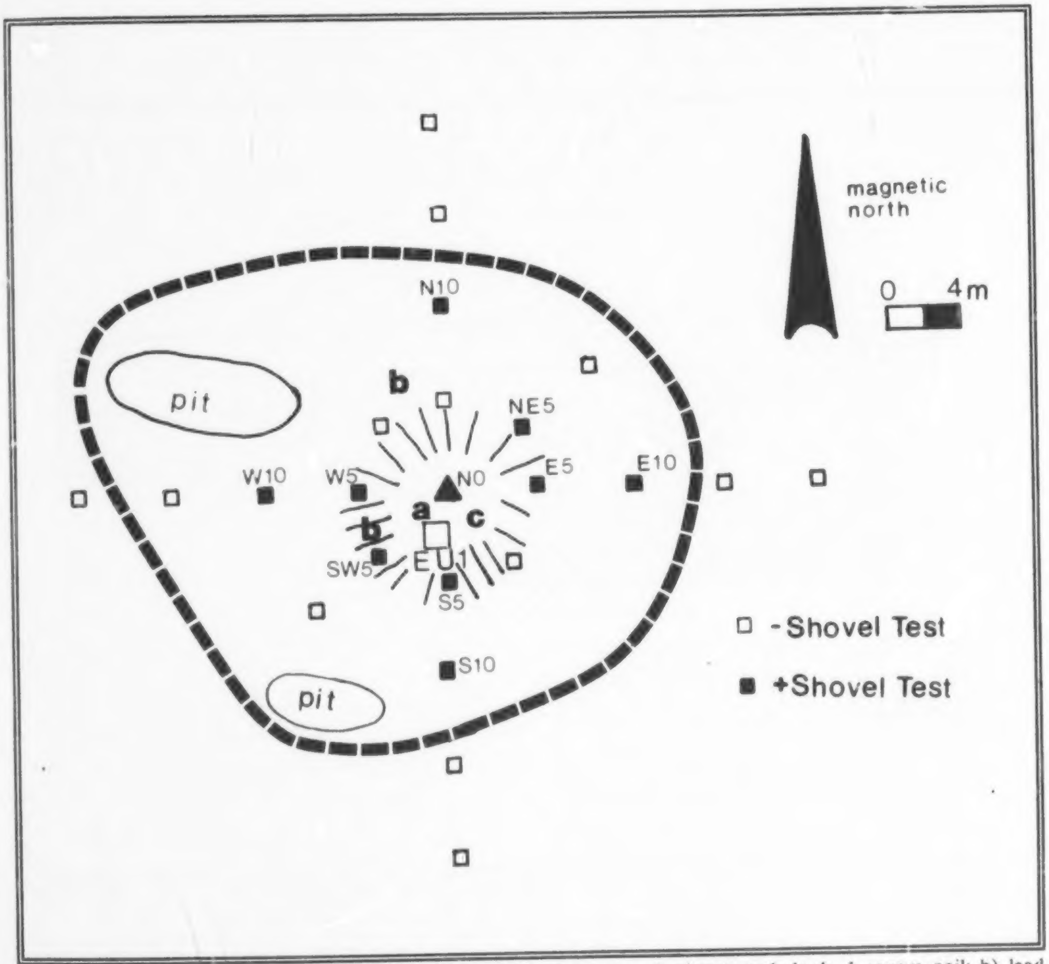

magnetic north
0 4m
pit
pit
N10
b
NE5
E5
E10
W10
W5
N0
a
c
b
SW5
EU1
S5
S10
□ -Shovel Test
■ +Shovel Test

Figure 14. Site Map of 16JE215. Key: a) 10 creamware, 1 pipestem, 1 daub, 1 square nail; b) lead glazed redware; c) brown faience.

Table 6. Materials Collected from 16JE215.

	Surf	N0 E0	N10	NE5	E5	S5	S10	SW5	W5	W10	EU1 L1	EU1 L2	Total
Lead glazed redware	5		1					1					7
Saintonge green glazed buff earthenware				1									1
Brown faience	1												1
Creamware	10				1						11		22
Pearlware											1		1
Dark green blown glass						2					3		5
Dark green blown glass kickup												1	1
Pale blue green blown glass							1						1
Light brown blown glass											3		3
Pipestem	1												1
Pipebowl											1		1
Rose head nail											1		1
Misc. square nail	1										2		3
Square nail shaft											1	3	4
Spike											1		1
Brick frag.	102.9										23.2		126.1
Daub frag.*	5.5				.4		2.1		.7	.2	3.2	2.3	14.4
Charcoal*							4.5					1.6	6.1
Snail shell							1						1

* Weight in grams

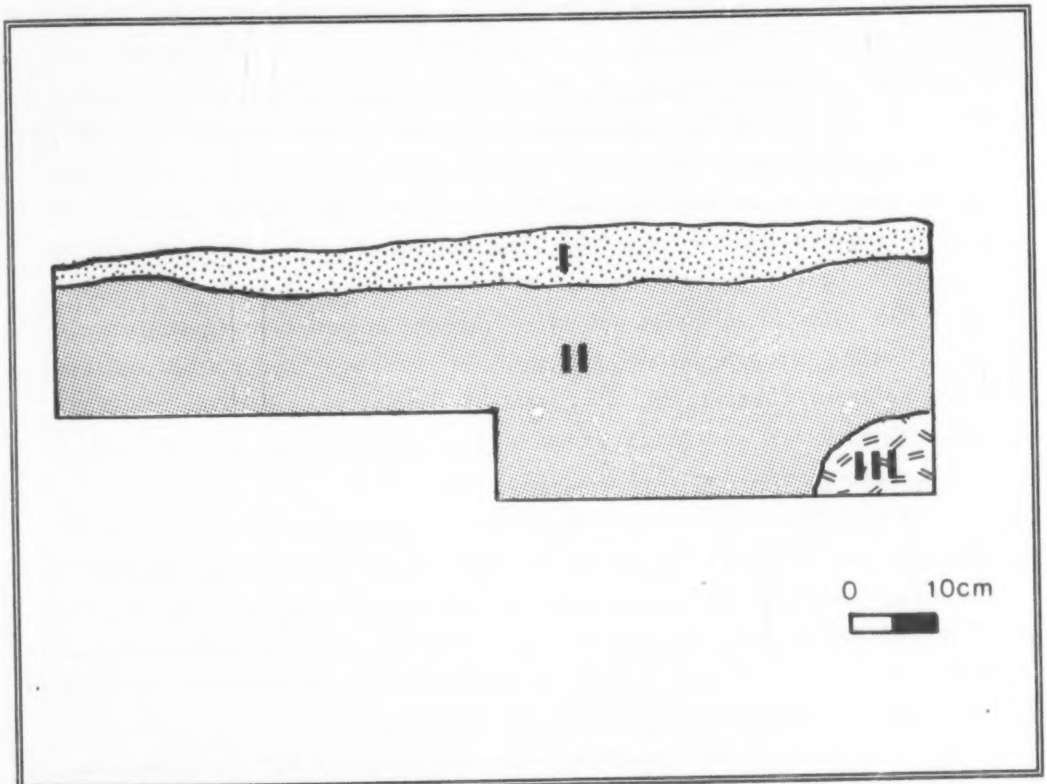

I
II
III
0
10cm

Figure 15. Profile of the north wall of EU1, 16JE215.

root disturbance, this stratum extended to 30 cm below surface. A soil probe test in the floor of the unit demonstrated that the underlying stratum was a 10YR 4/1 (dark gray) and 10YR 5/6 (yellowish brown) mottled silt clay, which extended to 130 cm below surface.

Artifacts recovered from the excavation unit included creamware, blown glass, pipe fragments, wrought nails and nail fragments, brick fragments, daub, and a spike (Table 6). One fragment of a wine bottle glass kickup was found. Only one pearlware sherd was recovered from the unit. The sherd exhibited etching of the glaze typical of sherds with worn-off overglaze decoration. It appears that the sherd formerly had overglaze hand-painting. Pearlware of this type is very unusual, and has not been found previously on late eighteenth/early nineteenth century southeastern Louisiana sites (Yakubik, in prep). Charcoal was mixed in with the cultural material.

Six liters of soil were collected from the culture-bearing stratum for wet screening through nested 1/4" and 1/16" screens. Lead glazed redware, metal, an acorn, charcoal, and a modern shotgun cap were recovered from the 1/4" screen. Floral and faunal remains, metal, brick, daub, and charcoal all were collected from the 1/16" mesh (Table 7).

The artifact density at the site was lower than those at 16JE197, 16JE214, and 16JE216. The relatively light artifact density and the limited horizontal extent of the scatter suggests that this site was occupied for only a short period of time. No patterning in artifact distribution was noted. The light scatter across the site appears to represent random dispersal of refuse. No secondary disposal concentration was identified.

Nonetheless, 16JE215 possesses research potential. Important data may be gained from the comparison of such briefly occupied sites to those which appear to have had longer occupations (e.g. 16JE197, 16JE214, and 16JE216). The integrity of the site has been demonstrated by this investigation. No evidence of disturbance due to plowing or other recent activity was noted at the site. As noted above, colonial period sites of this nature are rare in southeastern Louisiana. Finally, the group of colonial sites as a whole is unique. Therefore, the site should be nominated for inclusion on the National Register of Historic Places.

Table 7. Material Recovered from Water screening 6 Liters of Soil Collected from Excavation Unit 1, 16JE215.

1/4 Inch Mesh	
Lead Glazed Redware	1
Misc. Metal	1
Shotgun Cap	1
Acorn	1
Charcoal	0.1 gram

1/16 Inch Mesh	
Acorn Hull Frag.	1
Seeds	0.5 gram
Bone	0.1 gram
Metal	(present)
Brick	(present)
Charcoal	(present)
Daub	(present)

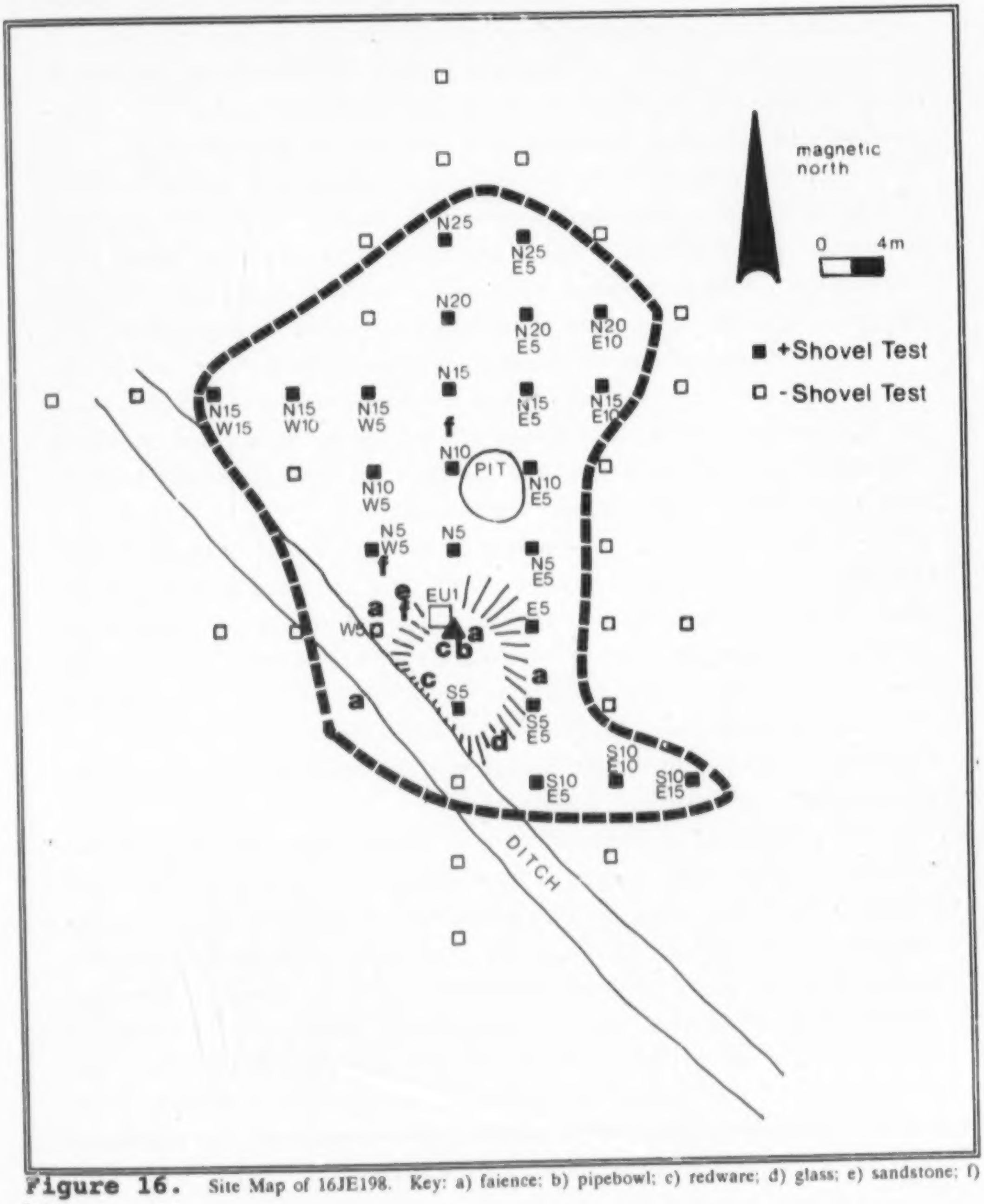
16JE198 (Colonial Building Site 4)

This site, designated Spanish Colonial Building Site No. 4 by Swanson (1988a:125-126), measures 40 m N/S and 30 m E/W at its maximum extent (Figure 16). A mound, which is approximately .75 m high and 12 m in diameter along its N/S axis, is located in the southern portion of the site. The site, including the mound, has been cut by a drainage ditch, but less than 10 percent of the site appears to have been impacted. In addition, four animal burrows were noted on the apex of the mound. No other evidence of site disturbance, including plowing, was observed.

To the north-northeast of the mound is a circular depression approximately 5 m in diameter (Figure 16). As was the case on 16JE197, 16JE214, and 16JE215, this likely represents a borrow pit for mound construction and/or *bousillage* manufacture.

A 1 x 1 m unit was excavated on the north slope of the mound. Placement of the unit was designed to avoid areas on the mound apex which had been disturbed by animals. All excavated soils were screened through 1/4" mesh. The unit was excavated in arbitrary 10 cm levels to a depth of 30 cm below surface. Because the cultural material appeared to be concentrated between 0-25 cm, only the SE quadrant of the unit was excavated to 40 cm below surface. Soils within the unit consisted of a 10YR 4/1 (dark gray) silty clay. A soil probe test executed in the floor of the unit indicated that this stratum extended to 60 cm below surface. Beneath this was a 10YR 6/1 (gray/light gray) silty clay mottled with 10YR 5/6-4/6 (yellowish brown/dark yellowish brown), which extended to at least 140 cm below surface.

A dense scatter of brick fragments concentrated along the east wall of the unit was noted during excavation of Level 1 (0-10 cm below surface). One brick clinker fragment was collected from this scatter. As shown in Table 8, the majority of artifacts recovered from Level 1 consisted of brick fragments, although daub, a spike, faience, and wine bottle fragments also were collected. The brick scatter extended into Level 2 (10-20 cm below surface), where it was mixed with large amounts of charcoal. Nails, daub, and one sherd of Saintonge green glazed buff earthenware also were collected


magnetic north
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N25 E5
N20
N20 E5
N20 E10
N15
N15 W15
N15 W10
N15 W5
N15 E5
N15 E10
f
N10
PIT
N10 E5
N10 W5
N5 W5
N5
N5 E5
f
e
a
f
EU1
E5
W5
a
c b
a
c
a
S5
S5 E5
d
a
S10 E10
S10 E5
S10 E15
DITCH

Figure 16. Site Map of 16JE198. Key: a) faience; b) pipebowl; c) redware; d) glass; e) sandstone; f) brick.

from Level 2. In addition, several *Rangia* fragments with adhering mortar were collected. This confirms the use of shell mortar for construction.

Three liters of soil were collected from the culture-bearing stratum in the excavation unit for wet screening through nested 1/4" and 1/16" screens. Charcoal and daub were recovered from both sizes of mesh (Table 9).

Ceramics collected from the surface and during shovel testing included a wide variety of coarse earthenwares and faience. Only one sherd of creamware was recovered. Other materials included blown glass, pipe fragments, wrought nails and nail fragments, brick, daub, *Rangia*, charcoal, and bone (Table 8). A fragment of sandstone was collected from the surface.

Four aboriginal ceramic sherds were collected from shovel tests in the northernmost portion of the site. These included two sherds of Addis Plain *var. St. Catherine*, one sherd of Moundville Incised *var. Buras*, and one sherd of Maddox Engraved var. unspecified. As discussed below, these sherds likely were utilized by the site's European inhabitants.

Examination of the distribution of brick in shovel tests at 16JE198 reveals that the highest concentrations occur along and roughly parallel to the ditch. This may suggest that architectural debris formerly contained in the southwestern, impacted portion of the mound was redeposited along the eastern bank during ditch construction (Figure 16). Daub was recovered only from the excavation unit on the mound, and from shovel tests excavated immediately adjacent to the pit (Figure 16). This supports the idea that this area was used for *bousillage* manufacture.

The patterning of domestic debris at this site appears to be distinctive. Only one glass sherd was recovered from a shovel test south of the N10 line, despite the fact that ceramics, glass and a pipe fragment all were found on the surface of or adjacent to the mound. Similarly, relatively little ceramics and glass were recovered from Excavation Unit 1. However, European ceramics, a pipe fragment, and/or faunal remains were recovered from 9 of the 14 positive shovel tests north of the N10 line (Figure 16). This may suggest that the site's inhabitants kept the area immediately adjacent to the residence fairly free from debris, and that they disposed of the majority of their household refuse to the north of the mound.

Cultural material was relatively rich at this site, and relatively little

Table 8. Materials Collected from 16JE198.

	Surf	N5	N10	N15	N20	N25	N0 E5	N5 E5	N10 E5	N15 E5	N20 E5	N15 E10	N20 E10
Heavily tempered pink earthenware, green interior glaze									1				
Saintonge green glazed buff earthenware			1										
Buff stoneware, brown slip and salt glaze					1								
Albisola slipped			1										
Redware, interior lead glaze						2							
Redware, brown ext. and int. slip and ext. lead glaze						1						1	
Redware, white interior slip and interior lead glaze	2												
Redware, remnants of exterior (slip?) and lead glaze	1												
Faience	1												
Brown faience	2												
Creamware													
Bell Plain *var. St. Catherine*											1	1	

Table 8, Continued.

	Surf	N5	N10	N15	N20	N25	N0 E5	N5 E5	N10 E5	N15 E5	N20 E5	N15 E10	N20 E10
Maddox Engraved *var. unspec.*													
Moundville Incised *var. Buras*						1							
Dark green blown glass kickup													
Light blue blown glass	1												
Light green blown glass							1						
Pipestem											1		
Pipebowl	1												
Rose head nail		1											
Misc. square nail													
Square nail shaft													
Spike													
Misc. metal					1					2			
Brick frag.*		2.6	10.8			11.5	87.4		7.4	1.2	1.8		11.3
Brick clinker													
Daub frag.*				1.2				.3		1.5			
Daub/brick frag*													
Burned daub*				9.9									
Sandstone*	13.7												
Charcoal*						.6		3.3					
Rangia				1									
Rangia mortar													
Bone*						44.0					2.5		

* Weight in grams

Table 8, Continued.

	N5 W5	N10 W5	N15 W5	N15 W10	N15 W15	S5	S5 E5	S10 E5	S10 E10
Heavily tempered pink earthenware, green interior glaze				1					
Saintonge green glazed									
Buff stoneware, brown slip and salt glaze									
Albisola slipped									
Redware, interior lead glaze									
Redware, brown ext. and int. slip and ext. lead glaze									
Redware, white interior slip and interior lead glaze									
Redware, remnants of exterior (slip?) and lead glaze									
Faience				2					
Brown faience									
Creamware			1						
Bell Plain var. St. Catherine									

Table 8, Continued.

	N5 W5	N10 W5	N15 W5	N15 W10	N15 W15	S5	S5 E5	S10 E5	S10 E10
Maddox Engraved *var. unspec.*					1				
Moundville Incised *var. Buras*									
Dark green blown glass kickup									
Light blue blown glass									
Light green blown glass									
Pipestem									
Pipebowl									
Rose head nail									
Misc. square nail			2						
Square nail shaft				1					
Spike									
Misc. metal			1	3					
Brick frag.*	128.7	14.8	15.2			15.8		81.4	17.9
Brick clinker									
Daub frag.*									
Daub/brick frag.*									
Burned daub*									
Sandstone*									
Charcoal*			10.7	6.1			1.4		
Rangia			1						
Rangia mortar									
Bone*									

* Weight in grams

Table 8, Continued.

	EU1 L1	EU1 L2	EU1 L3	EU1 L4	Total
Heavily tempered pink earthenware, green interior glaze					2
Saintonge green glazed		1			2
Buff stoneware, brown slip and salt glaze					1
Albisola slipped					1
Redware, interior lead glaze					2
Redware, brown ext. and int. slip and ext. lead glaze					2
Redware, white interior slip and interior lead glaze					2
Redware, remnants of exterior (slip?) and lead glaze					1
Faience	1				4
Brown faience	1				3
Creamware					1
Bell Plain *var. St. Catherine*					2

Table 8, Continued.

	EU1 L1	EU1 L2	EU1 L3	EU1 L4	Total
Maddox Engraved *var. unspec.*					1
Moundville Incised *var. Buras*					1
Dark green blown glass kickup	3				3
Light blue blown glass					1
Light green blown glass					1
Pipestem					1
Pipebowl					1
Rose head nail					1
Misc. square nail		2	1		5
Square nail shaft		1			2
Spike	1				1
Misc. metal					7
Brick frag.*	2357.0	1105.3			4112.1
Brick clinker	1				1
Daub frag.*	42.7	59.9	2.5	9.6	117.7
Daub/brick frag.*	22.8				22.8
Burned daub*					9.9
Sandstone*					13.7
Charcoal*		7.7	4.5	.4	34.7
Rangia					2
Rangia mortar		2.4			2.4
Bone*					46.5

* Weight in grams

Table 9. Material Recovered from Water Screening 3 Liters of Soil Collected from Excavation Unit 1, 16JE198.

1/4 Inch Mesh

Charcoal	1.4 grams
Daub	1.0 grams

1/16 Inch Mesh

Charcoal	(present)
Daub	(present)

of the site has been disturbed. Artifact patterning may suggest a different refuse disposal pattern than at 16JE197, 16JE214, and 16JE215. This suggests that further comparisons between the sites may yield additional data. Therefore, the site should be nominated for inclusion on the National Register of Historic Places.

16JE199 (Colonial Building Site 5)

This site, designated Spanish Colonial Building Site No. 5 by Swanson (1988a:126), is possibly multi-component. The site includes a low mound approximately .3 m high and 13 m in diameter. To the east of the mound and extending in a northwest-southeast direction is a linear ridge approximately 1 m wide and .2 m high. This ridge skirts the northeast edge of the mound, and probably derives from early twentieth century subdivision road construction (Swanson 1988a:237-263, personal communication 1989). To the east of the mound and the ridge is a crescent-shaped shell scatter approximately 22 m NE/SW and 4 m wide located on a very slightly elevated feature. Maximum site dimensions are 30 m N/S and 44 m E/W at its maximum extent (Figure 17).

Shovel tests at the site recovered daub, brick fragments, a non-diagnostic nail, charcoal, and bone (Table 10). The daub was concentrated on and adjacent to the southwest corner of the mound. The nail also was found in this area. These construction materials may derive from a structure which was formerly located on the mound.

Two sherds of creamware were noted on the surface at the time the site was initially inspected. These were flagged for later collection, but only one was found when the crew returned to define the site. These were the only European ceramics noted. However, one aboriginal sherd was recovered from Shovel Test W10. The sherd was classified as Addis Plain *var. St. Catherine*. The paucity of artifactual remains at this site may suggest that it was non-residential. Alternatively, and perhaps more likely, the site was only occupied for a very brief period of time.

A 1 x 1 m unit was excavated in the shell scatter to attempt to determine whether it was European or aboriginal in origin (Figure 17). The

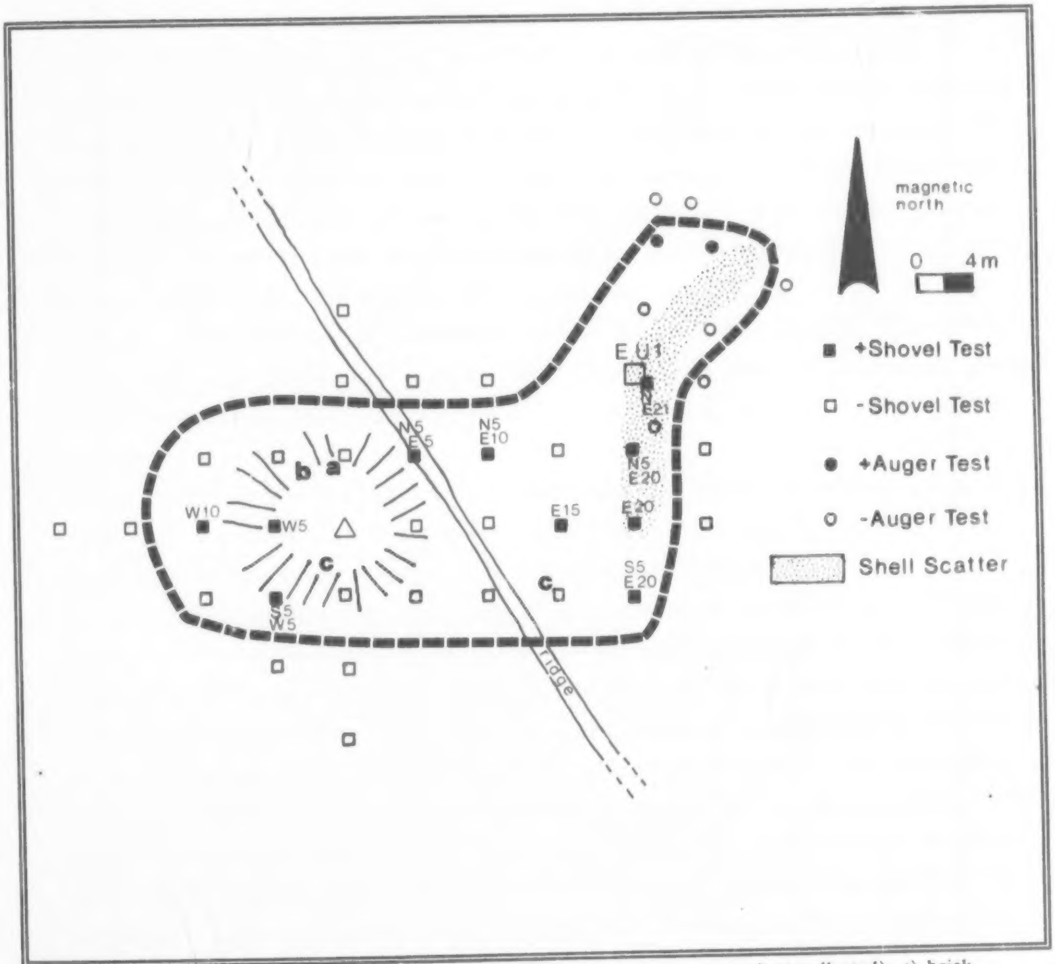
magnetic north
0 4 m
■ +Shovel Test
□ -Shovel Test
● +Auger Test
○ -Auger Test
Shell Scatter
EU1
N E21
N5 E5
N5 E10
N5 E20
E15
E20
S5 E20
W10
W5
S5 W5
a
b
c
c
ridge

Figure 17. Site Map of 16JE199. Key: a) creamware b) creamware (not collected); c) brick.

Table 10. Materials Collected from 16JE199.

	Surf	W5	W10	S5 W5	S5 E20	E15	N5 E5	N5 E10	N5 E20	Total
Creamware	1									1
Bell Plain var. St. Catherine			1							1
Nail (poss. L-head)		1								1
Brick frag.*	198.9						.1	63.7		262.7
Daub frag.*		.6	17.3	1.4						19.3
Charcoal*					.1	.2	.1			.4
Bone*									.35	.35
Rubber frag				1						1

* Weight in grams

unit was excavated in 10 cm arbitrary levels to a depth of 30 cm below surface. Soils were screened through 1/4" mesh. No artifacts were recovered subsurface. However, a single sherd of blown glass was found on the surface of the unit. Thus, the results were inconclusive.

Profiles of the north and east walls of the unit are shown in Figure 18. Stratum 1 was a 10YR 3/1 (very dark gray) silty clay which extended to approximately 7 cm below surface. Stratum 2 was a dense lens of *Rangia* shell in a 10YR 4/1 (dark gray) clay matrix; it extended to approximately 17 cm below surface. Shells within this lens were generally well-preserved, and a few showed evidence of having been burned. In general, the deposit appeared similar to those found at prehistoric sites investigated during this survey (viz. Part I). As seen in the profile, the lens tapered out to the west, and was absent from the northwest corner of the unit (Figure 18). This indicates that a major portion of the shell deposit is located to the east of the unit. Beneath the shell lens was a 2.5Y 5/2 (grayish brown) clay with brown mottling.

Auger tests were excavated to determine the extent of subsurface shell deposits. As shown in Figure 17, subsurface shell was recovered to the northwest of the scatter in an area devoid of surface shell.

Although this site was the least productive in terms of artifact recovery, it has the potential to yield information important to our history. First, this investigation suggests that the site was occupied for a very limited time. More intensive investigation may provide data concerning the nature of this occupation and the improvements which were made to the site while it was inhabited. Second, the relationship between the European occupation of the site and the shell midden remains problematic. It is unclear whether the midden represents a prehistoric occupation or whether the shells were brought to the site for construction purposes. Therefore, it is recommended that 16JE199 be nominated for inclusion on the National Register of Historic Places.

16JE216 (Colonial Building Site 6)

This area, designated Spanish Colonial Building Site No. 6 by Swanson

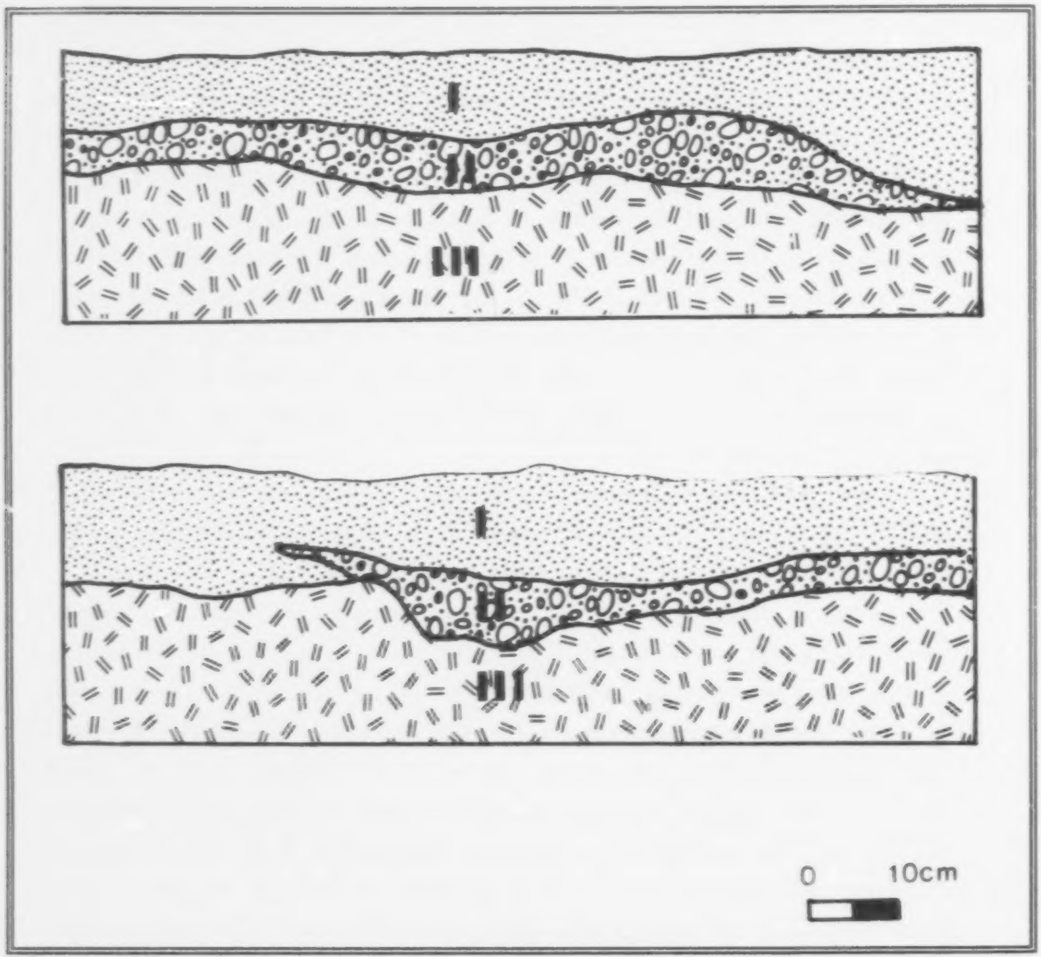
I
II
III
I
II
III
0 10cm

Figure 18. Profiles of the east and north walls of EU1, 16JE199.

(1988a:126-127), is located within the formerly plowed fields of Christmas Plantation (viz. Part I). It measures approximately 44 m N/S and 40 m E/W. Three of the later plantation ditches cross the site, but the majority of the site lies within the boundaries of these ditches (Figure 19).

The surface scatter was relatively dense at Site 6. Artifacts recovered from the surface included brick, creamware (13 sherds), brown faience (two sherds), and European coarse earthenwares (11 sherds). Ten of the latter appeared to derive from large storage vessels, and seven of these possibly derived from a single, yellow glazed southern French storage vessel. Finally, the only sherd of pearlware collected from the site was recovered from the surface (Table 11).

The shovel test at N20 W10 revealed a dense concentration of domestic and architectural debris. This included Saintonge green glazed buff earthenware, glass, nails, and large amounts of brick. As shown in Figure 19, this shovel test was located at the junction of two plantation ditches. This area evidently was too close to the ditches to have been plowed. Two adjacent 1 x 1 m units were excavated here.

Excavation Unit 1 was placed 1.5 m south of shovel test N20 W10. The unit was excavated in arbitrary 10 cm levels to a depth of 40 cm below surface. Excavated soil was screened through 1/4" mesh. Soil was collected for laboratory water screening through 1/4" and 1/16" mesh.

Stratum I consisted of a 10YR 3/1 (very dark gray) silty clay loam which extended to approximately 5 cm below surface. Beneath this was a 10YR 4/1 (dark gray) silty clay which extended to approximately 15 cm below surface. Artifacts, including historic and aboriginal ceramics, glass, brick, daub, bone, and nails were recovered from both strata, but artifact density was relatively low (Figures 20 and 21, Table 11). Underlying Stratum II was an artifact-rich midden stratum with a matrix of 10YR 4/1 (dark gray) clayey silt. This stratum extended to approximately 28 cm below surface. Figure 22 shows a plan view of this stratum at 23 cm below surface. Beneath the midden was a stratum of 10YR 5/1 (gray) silty clay, which was sterile with the exception of artifacts which had been carried down by tree roots and burrowing animals. No artifacts were recovered below 35 cm.

Ceramics recovered from the midden stratum of Excavation Unit 1

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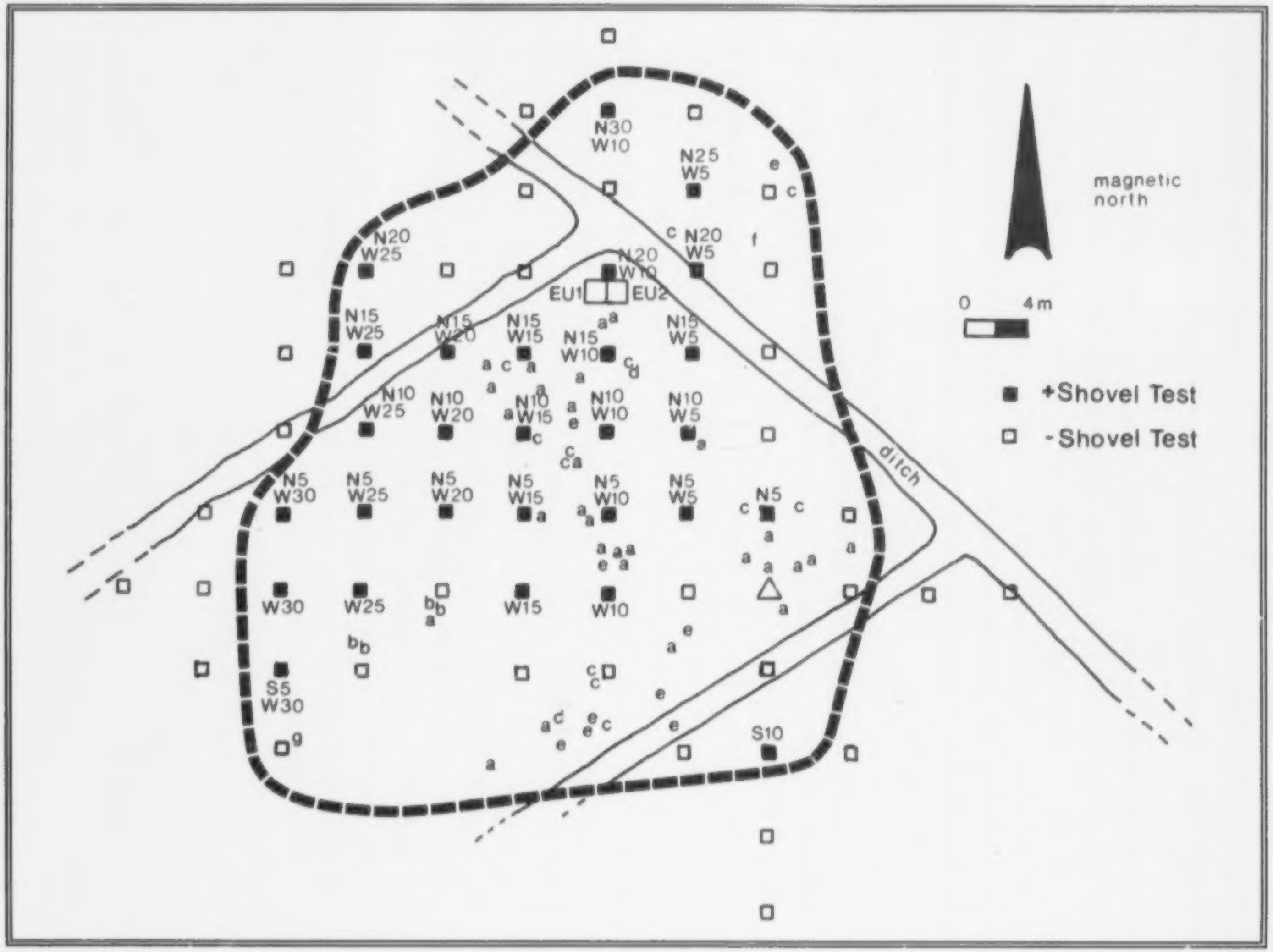

magnetic north
0
4m
+Shovel Test
-Shovel Test
ditch
N30 W10
N25 W5
N20 W25
N20 W5
N20 W10
EU1
EU2
N15 W25
N15 W20
N15 W15
N15 W10
N15 W5
N10 W25
N10 W20
N10 W15
N10 W10
N10 W5
N5 W30
N5 W25
N5 W20
N5 W15
N5 W10
N5 W5
N5
W30
W25
W15
W10
S5 W30
S10
a
b
c
d
e
f
g

Figure 19. Site map of 16JE216. Key: a) brick; b) oyster; c) creamware; d) faience; e) Southern french storage jar; f) coarse earthenware; g) pearlware.

Table 11. Materials Collected from 16JE216.

	Surf	S10	N5	N5 W5	N10 W5	N15 W5	N20 W5	N25 W5	W10	N5 W10	N10 W10	N15 W10	N20 W10
Heavily tempered pink earthenware green interior glaze													
Saintonge green glazed buff earthenware	1												2
Redware, green interior glaze													
Albisola slipped													
Lead glazed redware										1			
Redware, interior lead glaze													
Redware, white interior slip and interior lead glaze	1												
Redware, white slip and brownish-yellow interior glaze													
Redware, interior buff slip and lead glaze													
Redware, buff slip and eroded glaze													

Table 11, Continued.

	Surf	S10	N5	N5 W5	N10 W5	N15 W5	N20 W5	N25 W5	W10	N5 W10	N10 W10	N15 W10	N20 W10
Redware, int. white slip, ext. trailed white slip, lead glaze													1
Redware, int. white slip with red trailed slip, interior lead glaze													
Southern French storage vessel	6												
Unglazed pink earthernware	3												
Brown faience	2												
Faience													
Blue hand-painted faience													
Polychrome hand-painted faience													
Faience, eroded glaze													
Creamware	13	1	2										
Polychrome hand-painted creamware													
Annular creamware													
Pearlware	1												
Burnt ceramic													1
Clear glass													
Amber glass													
Dark green glass					1							1	
Dark green kickup						1							
Light green glass													1
Pale pink glass													

Table 11, Continued.

	Surf	S10	N5	N5 W5	N10 W5	N15 W5	N20 W5	N25 W5	W10	N5 W10	N10 W10	N15 W10	N20 W10
Buckle													
Pipestem													
Pipebowl													
Flint block													
French gunflint													
Flint flakes													
Lead shot													
Lead frag.													
Wrought nail													
Rose head nail													
Misc. square nail													1
Square nail shaft													2
Misc. metal										1			3
Brick frag.*	614.6		.1	59.5			36.4	.3	.5		39.6	2.6	554.1
Daub frag.*				21.9	.6	3.2	21.3						14.6
Daub/brick frag*													
Burned daub*													
Charcoal*													
Bone*													
Sandstone													
Stone													

* Weight in grams

Table 11, Continued.

	N30 W10	W15	N5 W15	N10 W15	N15 W15	N5 W20	N10 W20	N15 W20	W25	N5 W25	N10 W25	N15 W25	N20 W25	S5 W30
Heavily tempered pink earthenware green interior glaze														
Saintonge green glazed buff earthenware														
Redware, green interior glaze								1						
Albisola slipped														
Lead glazed redware														
Redware, interior lead glaze														
Redware, white interior slip and interior lead glaze														
Redware, white slip and brownish-yellow interior glaze														
Redware, interior buff slip and lead glaze														
Redware, buff slip and eroded glaze														

Table 11, Continued.

	N30 W10	W15	N5 W15	N10 W15	N15 W15	N5 W20	N10 W20	N15 W20	W25	N5 W25	N10 W25	N15 W25	N20 W25	S5 W30
Redware, int. white slip, ext. trailed white slip, lead glaze														
Redware, int. white slip with red trailed slip, interior lead glaze														
Southern French storage vessel														
Unglazed pink earthernware														
Brown faience														
Faience														
Blue hand-painted faience														
Polychrome hand-painted faience			1											
Faience, eroded glaze														
Creamware		1						1			1			
Polychrome hand-painted creamware	1													
Annular creamware														
Pearlware														
Burnt ceramic														
Amber glass										1				
Dark green glass														
Dark green kickup														
Light green glass														
Pale pink glass														

Table 11, Continued.

	N30 W10	W15	N5 W15	N10 W15	N15 W15	N5 W20	N10 W20	N15 W20	W25	N5 W25	N10 W25	N15 W25	N20 W25	S5 W30
Buckle														
Pipestem														
Pipebowl														
Flint block														
French gunflint														
Flint flakes														
Lead shot														
Lead frag.														
Wrought nail														
Rose head nail														
Misc. square nail														
Square nail shaft														
Misc. metal														
Brick frag.*			.8		51.9	.2	7.9	.7	70.9	1.6		.5		
Daub frag.*				.5	3.6							2.9		
Daub/brick frag.*														
Burned daub*														
Charcoal*														
Bone*													13.4	6.1
Sandstone														
Stone														

* Weight in grams

Table 11, Continued.

	W30	N5 W30	EU1 L1	EU1 L2	EU1 L3	EU1 L4	EU2 L1	EU2 L2	EU2 L3	EU2 L4	Total
Heavily tempered pink earthenware green interior glaze					1						1
Saintonge green glazed buff earthenware				1	7	1		1	7	3	- 23
Redware, green interior glaze									1		2
Albisola slipped					1	2					3
Lead glazed redware			2		8				1	3	15
Redware, interior lead glaze					1				2		3
Redware, white interior slip and interior lead glaze											1
Redware, white slip and brownish-yellow interior glaze								1			1
Redware, interior buff slip and lead glaze					1						1
Redware, buff slip and eroded glaze					3						3

Table 11, Continued.

	W30	N5 W30	EU1 L1	EU1 L2	EU1 L3	EU1 L4	EU2 L1	EU2 L2	EU2 L3	EU2 L4	Total
Redware, int. white slip, ext. trailed white slip, lead glaze											1
Redware, int. white slip with red trailed slip, interior lead glaze										2	2
Southern French storage vessel											6
Unglazed pink earthernware											3
Brown faience									2	2	6
Faience					5	1			1		7
Blue hand-painted faience									1		1
Polychrome hand-painted faience										1	2
Faience, eroded glaze	1				1			1	2		5
Creamware		1	2	1	20			3	31	8	85
Polychrome hand-painted creamware					1						2
Annular creamware					1						1
Pearlware											1
Burnt ceramic											1
Amber glass									1		2
Dark green glass					7	2		2	2	1	16
Dark green kickup										1	2
Light green glass			1	1	2		1				6
Pale pink glass					3						3

Table 11, Continued.

	W30	N5 W30	EU1 L1	EU1 L2	EU1 L3	EU1 L4	EU2 L1	EU2 L2	EU2 L3	EU2 L4	Total
Buckle					1	1					2
Pipestem					2					1	3
Pipebowl					2	1			1		4
Flint block					2						2
French gunflint					3				3		6
Flint flakes					2						1
Lead shot					2						2
Lead frag.					4						3
Wrought nail					4				9	4	17
Rose head nail					1						1
Misc. square nail				1	21	2		3	11	11	50
Square nail shaft					23		1		17	4	47
Misc. metal			1	3	27	6		2	4		47
Brick frag.*	5.9		5.4	135.3	1781.5	427.0	3.3	15.8	1031.0	854.8	5702.2
Daub frag.*			4.4	33.1	198.1	32.2	3.1	16.4	213.2	117.9	686.9
Daub/brick frag.*					62.1						62.1
Burned daub*					36.3	9.7					46.0
Charcoal*				.7	22.9	9.2		1.6	9.7	4.9	49.0
Bone*			2.1	1.3	34.6	1.1		1.4	65.9	15.9	141.8
Sandstone					1				2		3
Stone					2						2

* Weight in grams

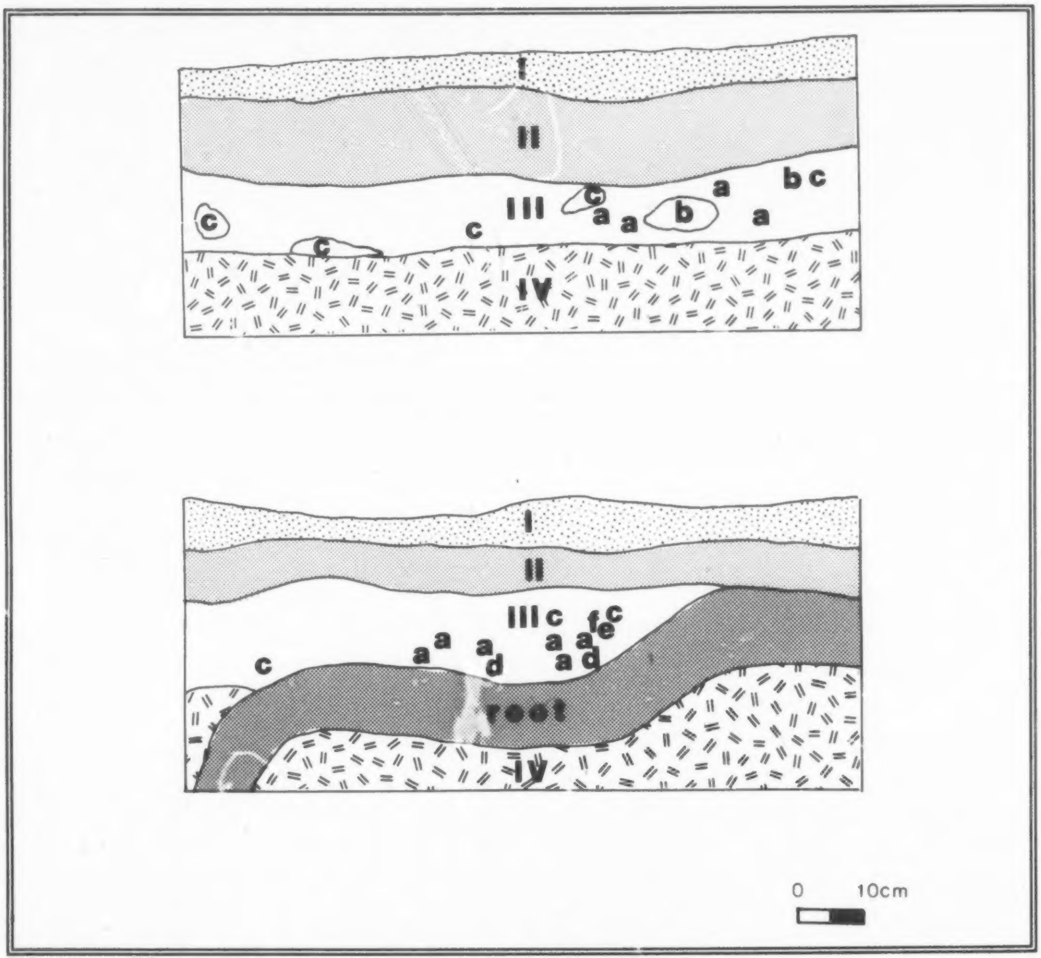
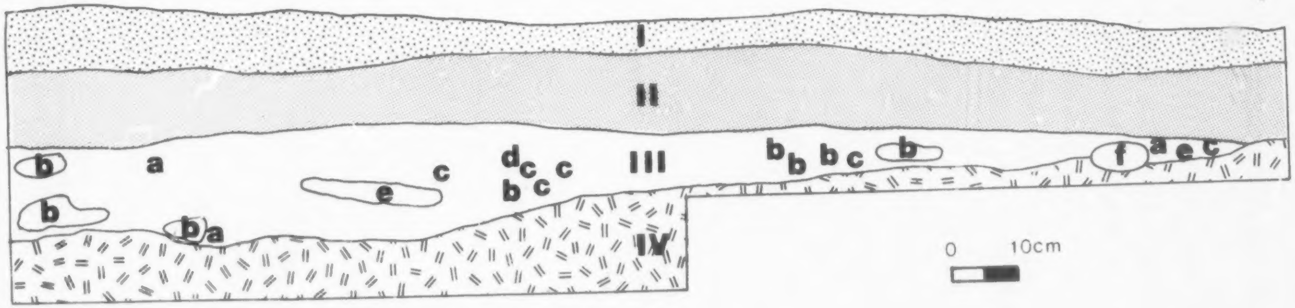

I
II
III
a
b c
c
c
a
a
b
a
c
c
IV
I
II
III c
f c
e
a
a
a
a
a
a
d
d
c
root
IV
0
10cm

Figure 20. Profiles of the south and east walls ofEU1, 16JE216.


I
II
III
IV
b
a
b
b
a
e
c
d
c
c
b
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b
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c
b
f
a
e
c
0
10cm

Figure 21. Profile of the north wall of EU1 and EU2, 16JE216.

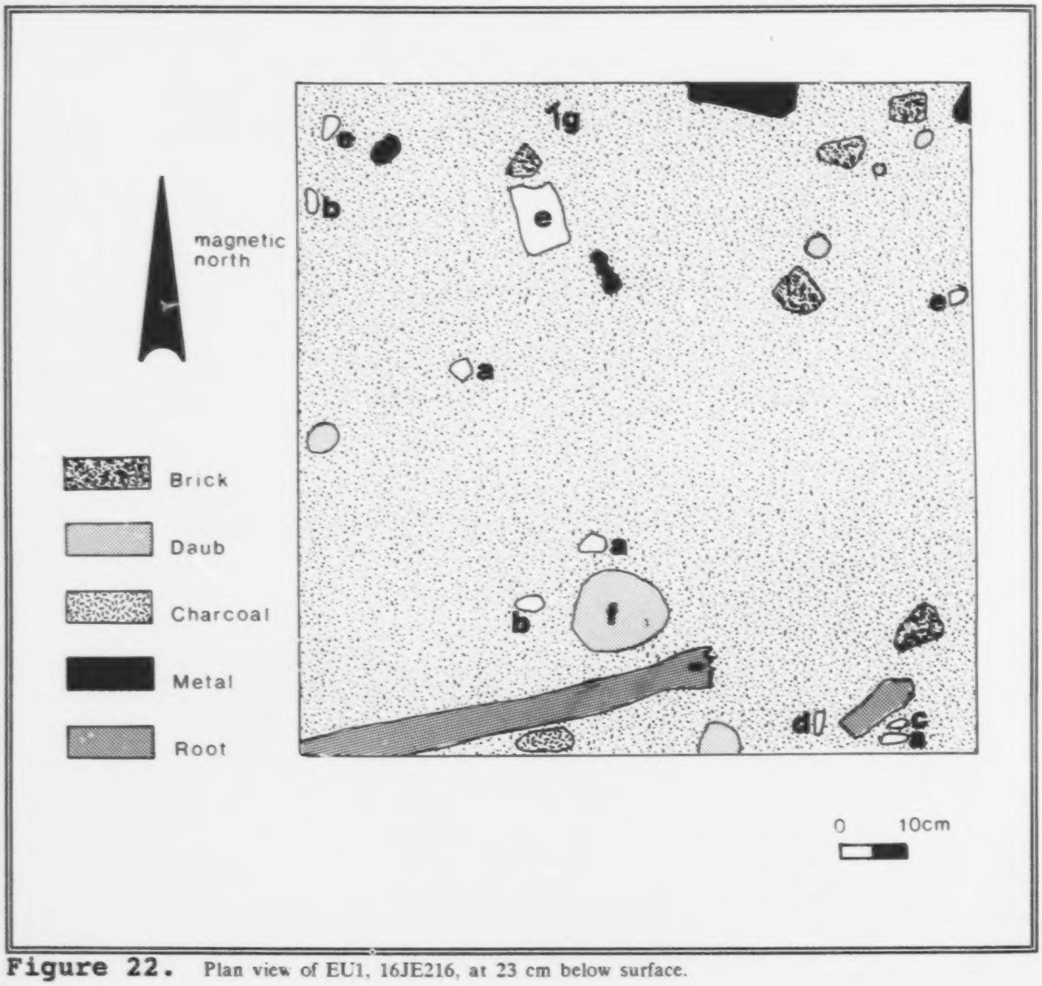

magnetic north
Brick
Daub
Charcoal
Metal
Root
c
g
b
e
e
a
a
b
f
d
c
a
0 10cm

Figure 22. Plan view of EU1, 16JE216, at 23 cm below surface.

included Saintonge green glazed buff earthenware, Albisola slipped redware, lead glazed redware, slipped and glazed redware, faience, and creamware. Blown bottle glass also was collected, as well as a buckle, pipe fragments, gunflints and flint debitage, lead shot and lead fragments, and metal (Figures 23 and 24). Sandstone also was recovered from the unit. Architectural debris included wrought nails and nail fragments, brick, daub, and burnt daub. A relatively large quantity (34.6 g) of bone was collected (Table 11).

In addition, a large number of aboriginal ceramics were recovered from this unit and Excavation Unit 2 (Table 12). Most of these were classified as Maddox Engraved. These sherds, as well as those recovered from 16JE197, 16JE198, and 16JE199, are discussed in detail below. The relatively large number of aboriginal sherds collected here, and the smaller numbers collected at the other sites, indicates that the European settlers were trading with Indians who probably lived somewhere in the Barataria region. This trade could have been for the pottery itself and/or for goods contained within the vessels.

A total of 28 liters of soil was collected from the midden stratum in Excavation Unit 1 for laboratory water screening. As shown in Table 13, additional faience, coarse earthenware, creamware, and aboriginal ceramics were collected from the 1/4" screen. Other recovered materials included glass, gunflint fragments, pipe fragments, nails, unidentifiable metal, brick, mortar, daub, bone, and charcoal. Small ceramic fragments also were collected from the 1/16" mesh, as were fragments of tin glaze which had chipped off the ceramic body. Glass, gunflint fragments, shell, and bone all were collected from the fine screen, and brick, daub, burnt daub, mortar, charcoal, and metal were all present. Finally, 28 pieces of shot (2 to 4 mm in diameter) were collected.

Because the unit was so rich, a second unit was excavated east of and adjacent to Excavation Unit 1. This unit was excavated in 10 cm levels until the midden stratum was reached at 20 cm below surface. The midden was then excavated in two 5 cm levels. Thus, Levels 3 and 4 of Excavation Unit 2 correspond to Level 3 of Excavation Unit 1. Excavation was terminated when sterile clay was reached at 30 cm below surface.

Figure 21 demonstrates that the stratigraphy noted in Excavation Unit

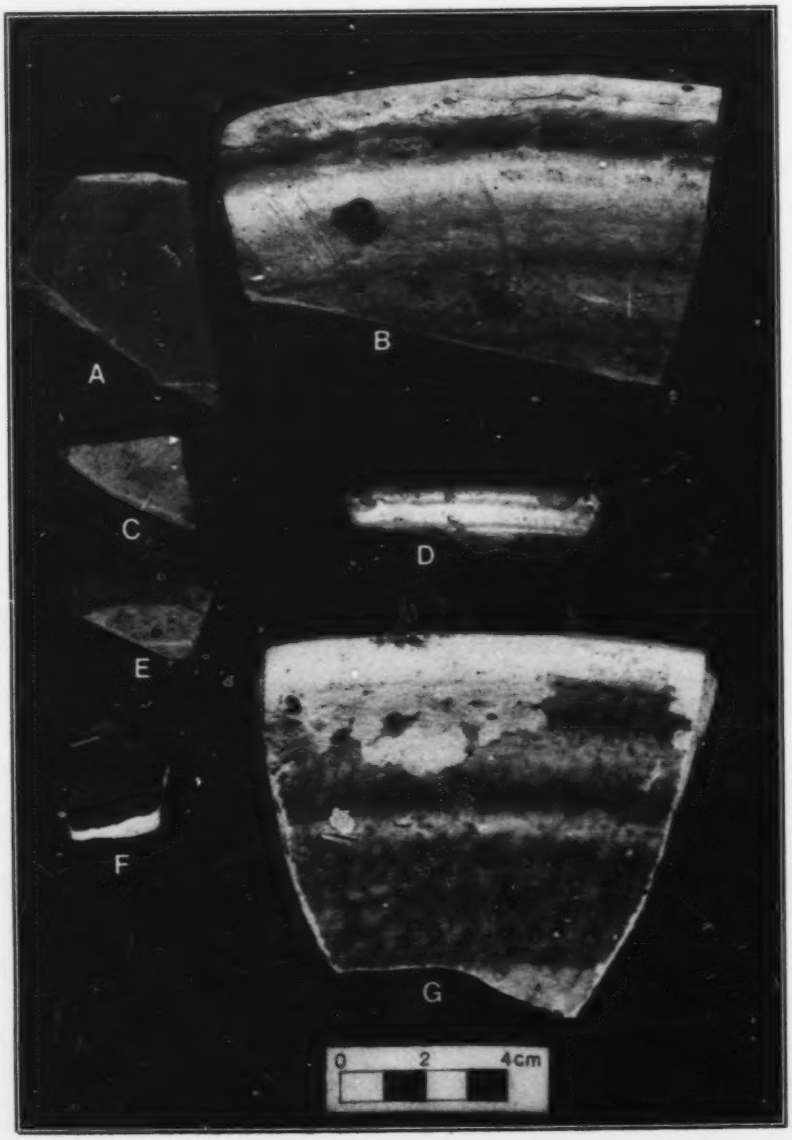


Figure 23. Course earthenwares from 16JE216. Key: A-B) lead glazed redware (EU2, Level 3 and Surface); C) redware, interior white slip and lead glaze (EU2, Level 4); D-E) trailed slip redwares (Shovel Test W10 N20 and EU2, Level 4); F) Albisola slipped (EU2, Level 4); G) Saintonge green glazed buff earthenware (EU2, Level 3).

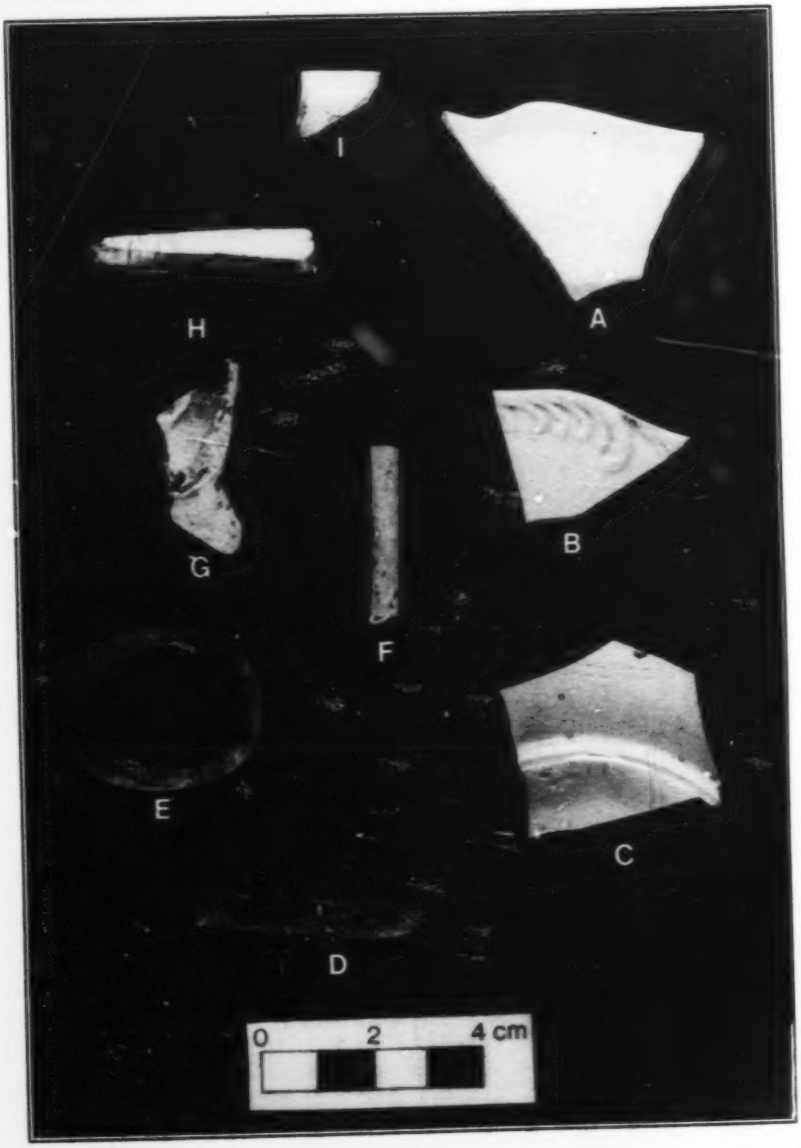


Figure 24. Artifacts from 16JE216. Key: A-C) creamware (EU2, Level 3 and EU2, Level 4); D-E) buckles (EU1, Level 3 and EU1, Level 4); F-G) pipe fragments (EU1, Level 3); H) brown faience (EU2, Level 4); I) faience (EU1, Level 4).

Table 12. Aboriginal Ceramics from 16JE216.

	W10 N10	W10 N5	EU1 L1	EU1 L2	EU1 L3	EU1 L4	EU2 L2	EU2 L3	EU2 L4	Total
Maddox Engraved *var. Emerald*	1			1	4	1	1	6	1	15
Maddox Engraved *var. Canary*					4				4	8
Maddox Engraved *var. unspec.*								2		2
Medora Incised *var. Medora*					6					6
Unidentified incised					1					1
Baytown Plain *var. Jean Lafitte*		1	1	1	6	3	1	5	2	20
Baytown Plain *var. Addis*					4					4

Table 13. Material Recovered from Water Screening Soil from Excavation Units 1 and 2, 16JE216.

1/4" Mesh	EU1 (28 1)	EU2 (12 1)
Creamware	3	1
Saintonge green glazed	1	
Brown glazed redware		1
Redware, orange interior slip	1	
Faience, eroded glaze	4	
Brown faience	1	
Maddox Engraved, _var. unspecified_	1	1
Dark green glass	1	
Light amber glass	1	
French gunflint fragment	2	1
7mm shot		1
Pipestem	1	
Pipebowl		1
Square nail shaft	3	1
Misc. square nail	6	1
Misc. metal	9	3
Brick*	12.5	20.4
Mortar*	4.5	
Daub*	31.4	37.8
Bone*	4.2	5.5
Charcoal*	4.9	2.4
1/16" Mesh		
Saintonge green glazed	2	
Faience	1	
Faience, eroded glaze	1	
Tin glaze fragments	18	4
Creamware	1	
Dark green glass	4	
Light green glass	2	
Light amber glass	3	2
Clear glass	1	
Pink glass	2	
French gunflint fragment	1	
Flint debitage		1
Flattened shot	6	1
2mm shot	10	1
3mm shot	9	2
4mm shot	3	1

Table 13, Continued.

1/16" Mesh	EU1 (28 l)	EU2 (12 l)
Seeds	6	
Seed hulls	2	
Carbonized seed		1
Rangia	1	
Snail shell	2	
Bone*	4.3	3.9
Brick	(present)	(present)
Daub	(present)	(present)
Burnt daub	(present)	(present)
Mortar	(present)	
Charcoal	(present)	(present)
Metal	(present)	(present)

1 was present in Excavation Unit 2. It should be noted that the midden clearly tapered out on the east side of Excavation Unit 2. Both the types and the categories of artifacts recovered from Excavation Units 1 and 2 were similar (Table 11). Also the twelve liters of soil removed from the Excavation Unit 2 midden for laboratory water screening yielded similar material (Table 13).

The similarities between the assemblages from Excavation Units 1 and 2, 16JE216, and Excavation Unit 2, 16JE197 should be noted. Both contained ceramics, glass, clothing hardware, pipe fragments, gunflints and flint debitage, shot, lead fragments, sandstone, large quantities of architectural debris, and bone. Like the midden revealed in Excavation Unit 2 at 16JE197, that at 16JE216 appears to represent an adjacent secondary refuse disposal area. Thus, the former residence at 16JE216 was probably located in the vicinity of Excavation Units 1 and 2.

The fact that 16JE216 has been plowed does not preclude examination of the spatial patterning of artifacts at the site. Riordan (1988) has demonstrated the utility of intensive surface collections for deriving information on site parameters and past activities at seventeenth century sites that were plowed for over 200 years. Lewarch and O'Brien (1981:27) define two types of artifact movement on plowed sites. Longitudinal movement is that which occurs in the direction of plowing, and is generally less than 3 m. Transverse movement is that which occurs perpendicular to the direction of plowing, and averages approximately 40 cm. In addition, they note that large artifacts move greater distances than small objects (Lewarch and O'Brien 1981:36).

Therefore, one would not expect substantial movement of artifacts at 16JE216 as the result of plowing, although larger objects, such as brick and ceramic storage vessel fragments, would be expected to be more displaced than smaller artifacts. Plow movement at Christmas Plantation was SW/NE; this is confirmed by visible furrows in many areas of the former fields. Maximum displacement of artifacts should therefore be SW/NE.

Based on the above, the patterning of the architectural debris in shovel tests tends to support the hypothesis that the residence was located nearby the midden. As noted above, a dense concentration of bricks, daub, nails, and metal was recovered from Shovel Test N20 W10. Relatively large amounts of brick and daub were also recovered from Shovel Tests N15 W15 and N20 W5 (Table 11 and Figure 19), which may be expected if longitudinal movement has occurred. It may be noted that while greater weights of brick occur in other shovel tests (e.g. Shovel Tests W25 and N10 W10), these consist of single bricks rather than the brick fragments found in Shovel Tests N15 W15 and N20 W5. The brick in the former two would be expected to have moved farther than that in the latter.

A cluster of surface brick was noted in the vicinity of the excavation unit. These may also derive from the former residence. Also, domestic debris such as ceramics and glass were recovered primarily north of the N5 line both from the surface and from the shovel tests. This suggests that domestic activity at the site was concentrated in this area.

One additional concentration of brick and daub was noted at Shovel Test N5 W5. Again, a concentration of surface brick was located in the vicinity, particularly to the SW of the test (Figure 19). It is possible that this may represent an outbuilding, since the remains in this area are too far from those at N20 W10 for their presence to be explained by plowzone disturbance.

Regardless of whether the remains in Shovel Test N5 W5 derive from a second structure, the pattern of surface brick suggests that all (brick) structural improvements formerly at the site were located in the vicinity of the NE ditch. With few exceptions, surface brick fragments were concentrated within 16 m SW of this ditch (Figure 19).

The principle of longitudinal movement appears to explain the distribution of six sherds of a southern French storage vessel found on the surface of the site. These sherds were recovered alongside and in the SE ditch from within a 12 m long area. It seems likely that the distribution of these sherds, which derived from a single vessel, was affected by plowing.

The preceding has demonstrated that despite the fact that 16JE216 has been disturbed by plowing and ditch excavation, artifact distribution can be utilized to address questions concerning past activity. In addition, portions of undisturbed midden are preserved at the site. Finally, the use of aboriginal ceramics by the site's European inhabitants deserves further investigation. Therefore, 16JE216 should be nominated for inclusion on the National Register of Historic Places.

Additional Potential Sites

Sites 16JE197, 16JE198, 16JE199, 16JE214, and 16JE215 were visited in February and March 1989 to determine if additional cultural features could be discerned while foliage was at a minimum. During this reconnaissance, three additional potential Canary Islander sites were located.

Potential Colonial Site 7 was located approximately 60 m north of the 16JE197 datum. A low (<.30 m height), poorly defined mound approximately 6 m in diameter was present. Brick fragments and one sherd of creamware were noted on the mound. Two depressions were located to the west and northwest of the mound. These measured 3 and 5 m in diameter, respectively. The proximity of this site to 16JE197 suggests that the two may be related (see **Discussion**, below), although the absence of surficial and buried cultural remains between them indicates that they should be considered separate sites.

Potential Colonial Site 8 was located approximately 90 m south of 16JE215. A mound, the most prominent portion of which measured approximately 7 m in diameter and 50 cm in height, was present. One brick fragment, a creamware sherd, and a blue hand-painted pearlware sherd were found on the mound. A depression was located to the southeast of the mound.

Potential Colonial Site 9 was located north of 16JE215. The most prominent portion of the mound at this site measured approximately 7 m in diameter and 40 cm in height. One fragment of daub was noted at the site.

No subsurface testing was undertaken at the newly identified sites, nor were they mapped. However, the presence of cultural features and artifacts similar to those found at the other colonial sites suggests that these are also Canary Islander sites. These sites should be protected until they are tested archaeologically and their resources evaluated.

ABORIGINAL CERAMICS

Introduction

A total of 56 aboriginal sherds were recovered during the excavations at 16JE216 (Table 12). In addition, four aboriginal sherds were collected at 16JE198, one at 16JE199, and one at 16JE197. The discussion below is largely drawn from analysis of the 16JE216 collection, owing to its relatively large sample size.

These Native Indian ceramics are very unique and interesting for a variety of reasons. First, the Indian ceramics are associated with historic materials from documented Canary Islander sites. This provides a rare opportunity to develop and test specific assumptions concerning the socioeconomic relationships between the Indians and the colonists during the late eighteenth century. Secondly, the Indian sherds from 16JE216 are extremely well made, and represent a fully developed and vibrant example of Native stylistic design, including decorative motifs possibly associated with the "Southern Cult" ceremonial complex. Most European sites in Barataria from the late eighteenth century yield no Indian ceramics. Even when a few Indian artifacts are present at European sites, these artifacts seldom demonstrate the full expression of Native culture seen at 16JE216.

Commonly, it is believed that most Indian societies in the Barataria Basin were either extinct or well on their way to extinction by the end of the eighteenth century (Swanton 1911; Bushnell 1917). The presence of well-made wares in this late context possibly contradicts this proposition and raises important issues concerning the longevity and cultural continuity of Indian culture into the nineteenth century.

Also, the vast majority of the decorated ceramics are of the type Maddox Engraved, and resemble those manufactured by the Caddoan Indians. There are several ways in which these Maddox Engraved sherds differ from Caddoan wares, and these will be discussed below. Nonetheless, the similarities between these ceramics and Caddoan ceramics, particularly in the method of manufacture, are very striking and raise important questions of how these ceramics arrived in the Canary Islander settlement.

The Indian sherds from 16JE216 include 32 (57%) decorated sherds, mostly of the type Maddox Engraved (69% of all decorated sherds). It is also clear that several of the sherds classified as "plain" derive from the decorated vessels, although they are not fitting sherds. The Indian ceramics from 16JE216 probably represent the fragmented remains of a few dozen vessels, and they strongly suggest that thay were traded into the site for use by the Canary Islanders rather than representing Indian occupation. The relative homogeneity of the pastes and designs increases the probability that the sherds belong to one or more of a few dozen vessels. It also suggests that a short period of time elapsed between the procurement and the disposal of these vessels. The interpretation of the 16JE216 Indian ceramic assemblage requires consideration of special function activities, primarily trade.

Indian vessels are not on the list of items provided to the Canary Islanders by the Spanish government at the time of their arrival (Swanson 1988a). Obviously, the Indian wares were obtained by the Canary Islanders either for their contents and/or for the containers themselves. The arrival of these wares in the Canary Islander settlement could have been a one-time occurrence.

The discovery of Indian ceramics at the Canary Islander sites provides preliminary archaeological information to investigate the largely unexplored issue of European and Indian interaction in the Barataria region. Research designs structured to test one or several of the hypotheses detailed below are required prior to the continued, controlled excavation of the Canary Islander sites. Investigation of the co-association of European and Indian artifacts is absolutely necessary to fully explore the patterns of trade, settlement, social interaction, and Indian culture in Barataria during the historic period.

Ceramic Analysis

Typological and attributal analysis of the Indian ceramics from the Canary Islander sites was conducted utilizing the typological nomenclature of Phillips (1970) and the attributes of paste, temper, vessel shape, and rim feature.

Maddox Engraved. Twenty-five sherds from 16JE216 and one sherd from 16JE198 belong to this type. These are subdivided into two varieties, one of which is new. As is often the case in typological analysis of Lower Mississippi Valley ceramics, the types and varieties established further north do not apply completely to the ceramics from the Barataria Unit of Jean Lafitte National Historical Park and Preserve. These differences are detailed below.

Fifteen sherds from 16JE216 are classified as Maddox Engraved *var. Emerald* (Phillips 1970:108). These sherds are very well made, consisting of fine paste with grog, clay, charcoal, and varying amounts of sand. Most sherds are black throughout, indicating use of the controlled firing technique common in the Caddoan ceramic industry. A minority of *var. Emerald* sherds are beige, red, and orange. Many sherds are well polished and lustrous. Vessels consist of incurving (severely constricted) jars and plates. Rims are outfolded or infolded and smoothed; lips are flat and round. Plate rims are tapered and often beveled on the interior.

Decoration is typical for this type; it consists of curvilinear incised designs filled with fine cross-hatching (Figure 25). The designs were applied to the vessel surfaces after the paste was dry but before the vessel was fired. Designs commonly begin one to three centimeters below a plain band around the upper vessel surface. Six sherds from *var. Emerald* are characterized by large cross-hatching. One sherd appears to be the tail of a stylized snake (EU 2, Level 3). Other atypical designs include the use of double zoning lines (EU1, Level 3) and combinations of filled in and plain curvilinear bands (EU2, Level 4).

Maddox Engraved *var. Canary* is a new variety introduced in this study. Eight sherds of this variety were recovered at 16JE216. These sherds are made on paste similar to Baytown Plain *var. Addis*, but contain a much higher number of sand particles than is normal for the type. High sand content is common in the ceramics from aboriginal sites in the Barataria Unit of Jean Lafitte National Historical Park and Preserve.

Variety Canary sherds are beige, brown, and gray. They are made on fine and very fine paste that contains heterogeneous temper of primarily clay,

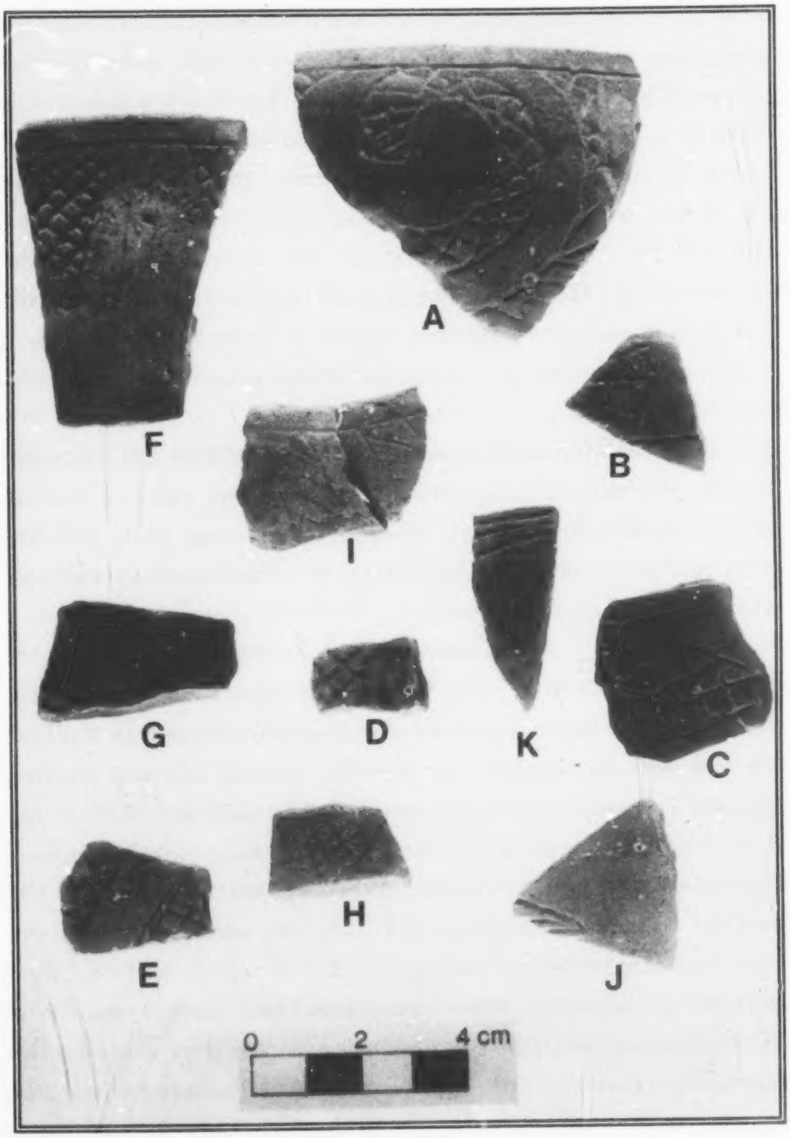


Figure 25. Aboriginal sherds from 16JE216. Key: A-E) Mattox Engraved var. Emerald; F-H) Mattox Engraved var. Canary; I-J) Medora Incised var. Medora; K) Unidentified incised. A is from EU2, Level 3; C is from Shovel Test W10, N10; and the remainder are from EU Level 3.

grog, and charcoal. Vessel shapes include bowls with slightly inflaring rims. Rims are infolded and smoothed, which produces a slight interior thickening. Most lips are flat or subrounded. Designs were applied after the vessel was dry, but prior to firing. The incised lines are thin and V-shaped. One sherd of this variety is close to being truly engraved (EU2, Level 4).

The most noticeable characteristic of *var. Canary* is the design motif. It consists of alternating triangular panels located on the upper half of the vessel (Figure 25). The incised zones are filled with cross-hatching. Otherwise, this design motif closely resembles the treatment utilized on vessels of the type Barton Incised *var. Arcola* (Phillips 1970:45). In sum, *var. Canary* is characterized by alternating triangular panels filled with cross-hatching on a paste similar to Baytown Plain *var. Addis*.

One sherd of Maddox Engraved *var. unspecified* was recovered from 16JE198. The sherd is incised on a dry paste. The paste is fine and clay tempered with significant amounts of sand. The design on the sherd is more common on varieties of Walls Engraved, but the paste appears to differ significantly from the latter type.

Medora Incised. Six sherds from 16JE216 belong to this type, all similar to *var. Medora* (Phillips 1970:130). At least four of these sherds are from the same vessel. Medora Incised sherds are made on both Baytown Plain *var. Addis* and *var. Jean Lafitte* paste based on sand content. As with most Indian sherds from 16JE216, the Medora ceramics are well made, fully oxidized, and beige, orange, black, or red in color. Shapes include severely constricted vessels with rims slightly thickened on the interior. Lips are beveled on the interior and subrounded. Designs are executed on dry paste, and incised lines are thin and V-shaped. Motifs consist of line-filled bands, either vertical or slanting, alternating with undecorated bands or zones (Phillips 1970:130; Quimby 1951:114-115).

Moundville Incised. One sherd of Moundville Incised *var. Buras* was collected from 16JE198. This incised, punctated sherd is well oxidized. It has a fine paste which contains shell, clay, grog, and much sand. The incisions and punctations were executed on a wet paste. The type is common in the Bayou Petre phase of the Late Mississippian.

Unidentified Incised. One sherd from EU 1, Level 3 at 16JE216 is difficult to identify. This sherd is similar to other ceramics from 16JE216 as it is made on very fine Baytown Plain *var. Addis* paste with considerable sand inclusions. The color is beige on the interior, gray/brown on the exterior, and the core is black. The sherd was decorated with a pointed implement. The design could be related to the Maddox Engraved designs which are highly variable and often include trailed lines at the ends of scrolls and/or meanders. The absence of cross-hatching prevents classifying this sherd as Maddox Engraved.

Plain Ceramics. Twenty-four sherds from 16JE216 were undecorated. Several were obviously portions of the decorated ceramics, being very similar in manufacture. Two varieties of plain ceramics are sortable in this collection.

Nine of the sherds from 16JE216 can be classified as Baytown Plain *var. Addis.* They are well made with fine paste and heterogeneous temper, including clay, grog, and charcoal. These sherds are polished and contain less sand than those classified as Baytown Plain *var. Jean Lafitte.* Plates and shallow bowls are common vessel shapes. Rims are generally infolded, smoothed, round and often severely inbeveled.

Fifteen sherds from 16JE216 are classified as Baytown Plain *var. Jean Lafitte.* They are well made, and were fully fired in a controlled oxidizing atmosphere so that the surface colors remained black or dark brown. Sherds are highly polished and contain various tempering agents. These sherds are distinguishable due to their very high sand content.

Variety Jean Lafitte was established to account for sherds similar to Baytown Plain *var. Addis* and Bell Plain *var. St. Catherine* that contained large amounts of sand (viz. **Part I, Aboriginal Ceramics**). However, the sherds from 16JE216 are significantly different from those recovered from aboriginal sites in the Barataria Unit. The typology of ceramic pastes, particularly the variety described as *Jean Lafitte* will require revision once a larger sample of sherds from the area's sites is analyzed. For the time being, *var. Jean Lafitte* serves to classify pastes with heterogeneous temper and high sand content.

One sherd from 16JE197, two sherds from 16JE198, and one sherd from 16JE199 were classified as Bell Plain *var. St. Catherine.* This ceramic ware is common in late Mississippian sites in south Louisiana (Giardino n.d.; Phillips 1970:61). It is described as having a compact, granular paste with fine inclusions of shell, very fine grit, or charred organic materials. Sherds recovered from aboriginal sites in the Barataria Unit of Jean Lafitte National Historical Park and Preserve also included small amounts of sand (viz. **Part I, Aboriginal Ceramics**); one of the sherds from 16JE198 contained a lot of sand particles.

The Bell Plain *var. St. Catherine* ceramics from the colonial sites all exhibit greater care and skill in manufacture than those from the local aboriginal sites. However, the sherd from 16JE199 was poorly oxidized, and had a slightly coarser paste than the other aboriginal sherds recovered from the colonial sites.

Discussion

Typological analysis of the decorated Indian ceramics from 16JE216 presents several obstacles, particularly when dealing with the type Maddox Engraved. To date, the number of Maddox Engraved sherds found during excavations in the Barataria region is very small. The number of Maddox Engraved sherds recovered from 16JE216 provides the largest in situ sample of this type excavated from the region. Comparable types from local sites differ significantly, particularly in paste and firing technique, from the Maddox Engraved sherds from 16JE216.

However, it is important to consider that the 16JE216 ceramics are obviously representative of a special activity, and that their type description must be restricted to the specific circumstances of their discovery. Should the Maddox Engraved and the other finely made sherds from the colonial sites turn out to be specially manufactured for trade, the application of the typological system developed herein to aboriginal contexts will be somewhat limited. The geographic distribution of these ceramic types and varieties may turn out to be non-contiguous.

Among the difficulties encountered during classification of the Maddox Engraved sherds from the Canary Islander sites is the pastes. The 16JE216 ceramics are mostly tempered with clay, grog, and sand. Established variety descriptions for Maddox Engraved are mostly dependent on paste. For example, Maddox Engraved *var. Emerald*, belonging to the Terminal Mississippian period, differs from *var. Baptiste* primarily on paste. Phillips (1970:61) describes *var. Emerald* as "comparable to the *St. Catherine* variety of Baytown Plain (sic)" (he obviously meant Bell Plain). *Variety St. Catherine* is described as having a "compact granular paste with fine inclusions, shell, very fine grit, or charred organic material. Smooth vessel surfaces" (Phillips 1970:61). The 16JE216 Maddox Engraved ceramics fit the *var. St. Catherine* paste most closely, although sand content, surface colors and the absence of shell are different from this variety's description. Consequently, the type description for most Maddox Engraved sherds from 16JE216 is *var. Emerald*.

The classification of Maddox Engraved in the Barataria region is complicated by the intergrading of pastes, particularly Baytown Plain *var. Addis*, Bell Plain *var. St. Catherine*, and Bell Plain *var. Holly Bluff*. The ceramics from 16JE216 that contain a high content of sand in the paste are classified as Baytown Plain *var. Jean Lafitte*. A smaller sample of sherds with heterogeneous paste and a low sand content are classified as Baytown Plain *var. Addis*. Ford (1936:43) describes Choctaw pottery as "fine grained but decidedly sandy." Designs for the ceramics included in the "Choctaw complex" however, differ significantly from those found at 16JE216, the latter being closer to what Ford describes as Caddo and Natchez (Ford 1936:57, 62).

Maddox Engraved *var. Silver City* is similar to *var. Baptiste* "except that the cross-hatching is somewhat finer and ware is equivalent to the *Holly Bluff* variety of Bell Plain" (Phillips 1970:109). The Maddox Engraved sherds from 16JE216 do appear to be somewhat more finely engraved than those commonly found in the Barataria region, particularly those from Bayou Petre components. However, paste difference between *var. Holly Bluff* and *var. St. Catherine* are very difficult to sort consistently. Some revision of this typological morass was attempted by Steponitis (1976) and others (see especially Gagliano et al. 1979 et seq; Neitzel 1983:93), but many of these refinements are not widely published.

Phillips (1970:60) in his discussion of Maddox Engraved *var. Silver City* illustrates the difficulty experienced when classifying late period material from the Barataria region:

> ...(*var. Silver City*) is normally tempered with finely pulverized shell, but other inclusions (?) may also be present... When the high polish we assume to be characteristic of the variety is still intact, very little shell is to be seen on the surface. Often the shell appears to have leached (or burned?) out completely, leaving a vesicular laminated paste structure easy to identify. But there are still other cases in which you can see neither shell nor cells left by its leaching; the general character of the paste then becomes very similar to that of the *Addis* variety of Baytown Plain. Obviously we are close here to the borderline between clay and shell tempering. Farther south we shall be setting up a variety of Bell Plain (*St. Catherine*) in which shell occurs only incidentally as inclusions that may have been accidental.

Analysis of the Maddox Engraved pastes from 16JE216 is further complicated by the likelihood that they may have been manufactured outside of the study region. Mineralogical analysis of the Maddox Engraved sherds is required to test this assumption. Maddox Engraved ceramics reported to date from Barataria and adjacent regions are either made on *var. St. Catherine* or *var. Addis paste* (Giardino n.d.). These examples of Maddox Engraved differ from those found at 16JE216 in that they are mostly beige in color, much thicker than the 16JE216 sherds, and are seldom finely incised. The Maddox Engraved material from Sims, Area 3 and 16JE163 (see Part I) more closely resemble Quimby's Fatherland Plain type, described as coexistent with the Natchezan "culture type" (Quimby 1942:264) and renamed Bell Plain *var. St. Catherine* by Phillips (1970).

A final complication in making legitimate paste distinctions in the study area centers around the significance of shell tempering during classification. Phillips (1970:108) points out that "presence or absence of shell tempering does not seem to have quite the same significance in the southern part of the Lower Mississippi Valley as we have (perhaps erroneously) attributed to it in the North."

Maddox Engraved *var. Baptiste*, the clay tempered variety that Phillips (1970:108) defined on chronological grounds and that was subsequently dropped by Neitzel (1983), may prove to have validity in the Lowermost Mississippi Delta. Sherds from 16JE216 are mostly clay and/or grog tempered and are thus similar to *var. Addis*. These sherds could be classified as Maddox Engraved *var. Baptiste*, although this variety is said not to extend into the historic period (Phillips 1970:107). The new variety *Canary* seems, at this time, to be made exclusively on *var. Addis* paste.

One final characteristic of the Maddox Engraved sherds from 16JE216 is evident, although there seems no need at this time to establish a new variety to account for these sherds. Six sherds, all classified as *var. Emerald*, exhibit relatively large cross-hatchings. The paste and execution is similar in other respects to *var. Emerald*. These large cross-hatchings are noted only for future reference.

Comparison between Maddox Engraved sherds from 16JE216 and those from the Caddoan region provide insight into the nature of the 16JE216 ceramic industry. In the southern region of the Lower Mississippi Valley, Maddox Engraved is usually incised with thin shallow lines which were applied after the vessel was dry but before firing. In the Caddoan region, designs were commonly applied on surfaces after the vessel was fired. These designs often consisted of cut-out areas and include the use of red pigment in the design (Webb and Gregory 1978).

Many sherds from 16JE216 illustrate the highly controlled firing technique common in Caddoan ceramics. That is, vessels were fired in a low oxygen environment resulting in thin, hard, ceramics that are mostly black or brown. Polishing or burnishing is also common on the 16JE216 ceramics as it is on Caddoan wares (Webb and Gregory 1978:4). Most of the Maddox Engraved sherds from 16JE216 are also similar to the Caddoan styles in the use of curved motifs, including spirals, scrolls, meanders, and possibly stylized serpent designs (Webb and Gregory 1978).

The Maddox Engraved sherds from 16JE216 are distinct from Caddoan ceramics in several ways. First, the designs are incised rather than truly engraved. Phillips (1970:107-108) states that Maddox Engraved is characterized by zones or bands formed with incised lines filled with fine cross-hatching. Further, he states that "the Lower Mississippi varieties of the type normally show a contrast between the incised framing lines and the cross-hatched 'engraving,' implying the use of different tools, possibly at different stages of the manufacturing process" (Phillips 1970:108).

Explanation: Testable Hypotheses

More thorough typological analyses are required for a fuller understanding of the ceramics being excavated from the Canary Islander sites. Additionally, hypotheses should be formulated to guide future research. First, the analysis of the physical properties of the ceramics, particularly the paste and the temper, is required to identify the potential source for these highly unusual materials.

The ceramics from 16JE216 are apparently "exotic" when compared with coeval Indian ceramic assemblages. It is possible that the 16JE216 ceramics were not manufactured locally, particularly in view of their close similarities to the ceramic designs and manufacturing techniques found in the Caddoan region. Wares similar to those from 16JE216 are not found in contemporaneous Indian settlements in Barataria (i.e. the Sims site, Area 3), although some examples of the "southern variant" of Maddox Engraved do occur at these protohistoric sites.

The Caddoan tribe closest to the study area during the early historic period was the Natchitoches. They were relocated in the vicinity of Lake Pontchartrain to trade with the French but returned to the Red River area in 1714 (McWilliams 1953), nearly 80 years prior to the deposition of the Caddo-like ceramics at 16JE216.

Alternatively, the 16JE216 wares could represent a special ware manufactured by local, non-Caddo Indians solely for the purpose of trading to Europeans. This would explain in part the absence of similar sherds from Indian villages. This hypothesis may suggest the presence in local villages of Caddo potters, acquired either through marriage or raids.

It is also possible that the local Indians or the Europeans traded for these wares with Caddoan Indians living further north along the Mississippi. Local tribes (possibly Ouacha and/or Chawasha) could have acted as middle men in the trade of artifacts to the inhabitants of Barataria.

It is clear that further research and excavation is needed to explain the archaeological discovery made at the Canary Islander sites. Essential is a thorough historical study addressing the role of the Europeans and the Indians in the movement of goods and services throughout Barataria and surrounding regions. The history of the area is quite varied and requires addressing the roles of the Spanish, French, Anglo-Americans, Canary Islanders, and Indians in the socioeconomic systems that characterized southern Louisiana during the eighteenth century. We know, for example, that after the end of the French and Indian War, French traders continued to control most Indian affairs in Louisiana due to the quality of their relationship to the Indians (Webb and Gregory 1978:19). The French in Louisiana had a particularly close relationship with the Caddo until the Louisiana Purchase put an end to the "old Caddo-French-Spanish symbiosis" (Webb and Gregory 1978:20).

The answers to many of the important questions raised in this discussion will require close coordination between ethnohistorians and archaeologists. Further excavations, guided by research designs and historical documents, are absolutely necessary to more fully explore the vastly important contents of these sites, particularly 16JE216.

DISCUSSION

Dating the Sites

The ceramic assemblages from the sites are consistent with the documented occupation dates for the community. Mean Ceramic Dating (South 1977) was undertaken for the collections as a whole. The resulting Mean Ceramic Date for the six sites combined was 1788.5 (n=265). The documented occupation midpoint would be 1790, since the Canarians began arriving in 1778, and all but very few (such as Sanchez and Madame Olivares, see above) departed before or at the time of the Mississippi River Crevasse in 1802.

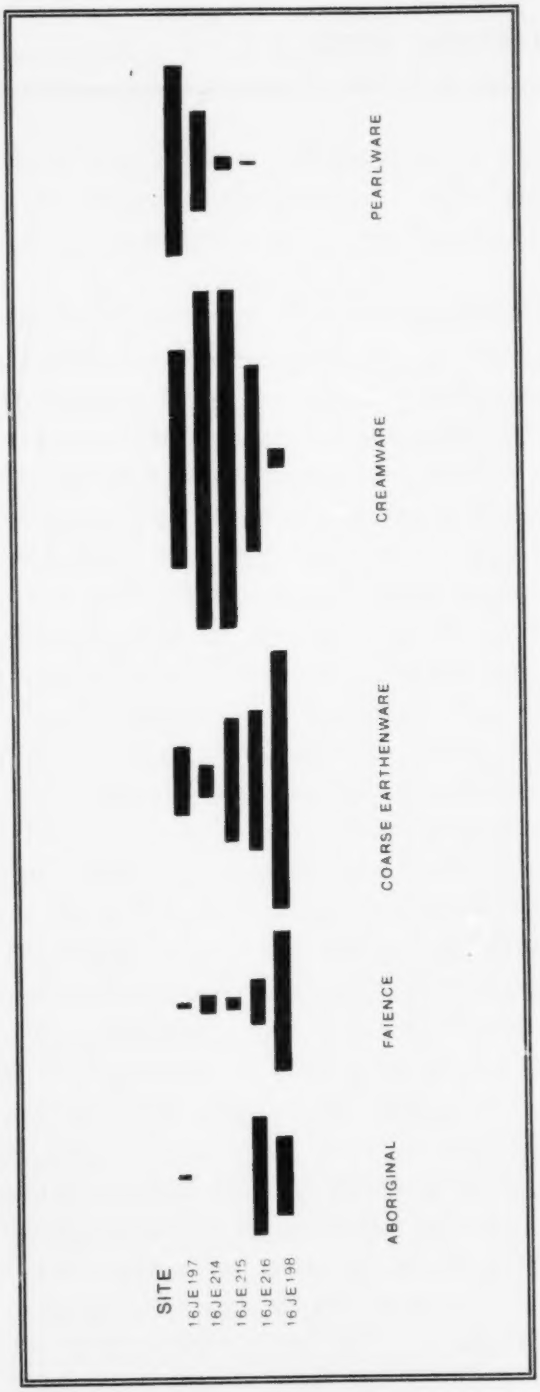
During analysis of the ceramic artifacts, it became evident that the sites had very different assemblages in terms of the relative frequencies of major ceramic types. The virtual absence of creamware at 16JE198 and of faience at 16JE197 and 16JE214 was particularly striking. Since the colonists probably all were equally impoverished when they settled in Barataria, it is unlikely that socioeconomics contributed to differences in relative ceramic frequencies during the early years of the settlement. Because creamware use replaced that of faience sometime during the late eighteenth century, this suggested that there may be temporal differences between the sites.

To examine these differences, ceramic frequency seriation of the collections from 16JE197, 16JE214, 16JE215, 16JE198 and 16JE216 was undertaken. 16JE199 was excluded because only one sherd of creamware and one aboriginal sherd were collected from the site. The ceramic assemblages were divided into the categories aboriginal ceramics, faience, coarse earthenware, creamware, and pearlware. The percentage of each category was calculated and graphed.

One potential problem with the seriation is that the sample sizes for some of the sites are smaller than ideal. Minimum sample size estimates for reliable seriation have ranged from 50 (Ford 1962) to 100 (Meggars 1968). These arbitrary size estimates were developed for prehistoric collections, which lack the chronological precision of historic materials. Popularity trends and manufacturing dates for most historic types are documented. Also, seriation involving relatively small historic samples have been successfully undertaken elsewhere (Goodwin, Yakubik, and Goodwin 1984). Nonetheless, it is acknowledged that larger samples may effect the seriation presented here as well as the conclusions drawn therefrom.

As shown is Figure 26, the seriation was nearly perfect. 16JE198 had relatively large amounts of coarse earthenware, faience, and aboriginal ceramics, but it had little creamware and no pearlware. Creamware appeared in greater proportions in the 16JE216 ceramic collection, while relative frequencies of faience and coarse earthenware were reduced. Pearlware was present, but it represented less than .5% of the assemblage. Both creamware and pearlware appeared in greater proportions at 16JE215 and 16JE214, while the relative frequencies of faience and coarse earthenware decreased. At 16JE197, pearlware is more abundant than creamware, while faience represented only 1% of the collection.

It should be noted that while use of both faience and coarse earthenware decreased as a result of increased utilization of creamware and pearlware, coarse earthenware decreased less dramatically than faience. This may be the result of the different functions of the two wares. While coarse earthenwares from the sites appear to be primarily utilitarian vessels, the


SITE
16JE197
16JE214
16JE215
16JE216
16JE198
ABORIGINAL
FAIENCE
COARSE EARTHENWARE
CREAMWARE
PEARLWARE

majority of faience was tableware. Similarly, most of the creamware and pearlware was tableware. Thus, it would be expected that increased use of creamware and pearlware would have a greater effect on the utilization of faience.

The two sites which exhibited the earliest European material also had the greatest amounts of aboriginal ceramics. This suggests a greater interchange between Europeans and aboriginal groups in the early years of the settlement. However, it should be noted that one aboriginal sherd was recovered from 16JE197, while none were collected from 16JE214 and 16JE215. This may be the result of sampling error; there apparently was less use of aboriginal ceramics in the later years of the settlement.

The seriation should not suggest that there was no overlap between the occupation of the various sites. Rather, the temporal differences suggested by the seriation may reflect differences in the initial dates of occupation of the sites and the relative lengths of these occupations.

On the basis of the seriation, it was hypothesized that 16JE198 and 16JE216 were established at the same time because both had high relative frequencies of aboriginal material and faience. Also, the occupations at 16JE197, 16JE214, and 16JE215 were established at a similar date but later than 16JE198 and 16JE216, because the former three exhibited a heavy reliance on Anglo-American ceramics. To test this hypothesis, the frequencies of aboriginal ceramics, faience, coarse earthenware, creamware, and pearlware at 16JE198 and 16JE216 combined were compared to those from 16JE197, 16JE214, and 16JE215 combined using chi square (Table 14). As shown in Table 14, the null hypothesis that there is no difference in the ceramic frequencies of the two groups is rejected at the .001 level. Thus, the differences in the ceramic frequencies between the two groups is statistically significant. The following interpretation presents a possible explanation of the pattern exhibited by the seriation, while accounting for the probable length of occupations suggested by the relative amounts of cultural debris recovered from the sites.

Sites 16JE198 and 16JE216 were probably established during the initial settlement of the Canary Islanders in 1779. The assemblage from 16JE198 suggests that creamware was not yet generally available at that date. 16JE198

Table 14. Chi Square Comparing Ceramic Frequencies From 16JE198 and 16JE216 (combined) and 16JE197, 16JE214, and 16JE215 (combined).

	"Earlier" Group	"Later" Group	Total
Aboriginal Ceramics	60 (36.40)	1 (24.60)	61
Faience	28 (19.10)	4 (12.04)	32
Coarse Earthenware	78 (62.06)	26 (41.94)	104
Creamware	89 (110.40)	96 (74.60)	185
Pearlware	1 (28.05)	46 (18.95)	47
Total	256	173	429

$X^2 = 133.349$

$X^2\ .001 = 18.467$

was abandoned soon thereafter and before creamware became widely available. The site was probably abandoned no later than 1783, when large numbers of the settlers left the area for Terre aux Boeuf in St. Bernard Parish. Occupation of 16JE216 continued, but it apparently was abandoned before pearlware was popularized. Because there were only 25 white settlers left in Barataria by 1788, it is likely that the site was abandoned prior to that date.

The occupations at 16JE197, 16JE214, and 16JE215 appear to have been established after creamware was widely available to the colonists. Because they apparently were established following the initial settlement of the colonists, these occupations likely represent new households (i.e. new settlers or the children of the original settlers) or the movement of settlers to what they perceived to be more desirable locations. These "later" occupations might have included settlers building new home sites on abandoned lands, or taking up residence on previously abandoned home sites. As noted in field investigations, above, occupation debris beneath the floor and the use of broken bricks in the feature at 16JE214 is strong evidence for an earlier building episode at this site.

Of these three sites, 16JE215 was the first abandoned. Like 16JE216, the small amount of pearlware at the site suggests that it was abandoned prior to the popularization of this type. The relatively greater quantities of pearlware at 16JE197 and 16JE214 suggest that these were occupied by settlers listed in the 1788 census, and who probably continued to reside in Barataria at least until the final relocation of settlers in 1802.

The seriation suggests that 16JE197 was the last of the five sites to be abandoned. As noted in the historic overview, this may have been the home site of Maria Olivares, who died in Barataria in 1807. If this was the Olivares property, then Potential Colonial Site 7 may be the location of one of the two slave cabins said to have been located on her property.

The results of this seriation also have implications for an understanding of ceramic chronology in southeastern Louisiana. The use of faience and European coarse earthenwares in Louisiana continued well into the second half of the eighteenth century, despite the transfer of the colony to Spain in the 1760s. Creamware was introduced at some time in the late eighteenth century, and thereafter ceramic assemblages are almost exclusively composed of Anglo-American types. Examination of collections such as those from Elmwood Plantation (Goodwin, Yakubik, and Goodwin 1984), the Hermann-Grima house, and the Chalmette Battlefield (Yakubik in prep) indicate that the appearance of creamware was sudden and without a gradual increase in popularity. Also, British types which preceded creamware (e.g. white salt glazed stoneware, delftware, etc.) are extremely rare in southeastern Louisiana. This suggests that creamware was introduced to the area later than its initial manufacture date of 1762, and that by the time it was introduced creamware had already eclipsed earlier types in popularity.

The seriation, and in particular, the assemblages from 16JE198 and 16JE216 suggest that creamware was not widely available until sometime after the Canary Islanders settled in 1779. At minimum, it was not available to the poorer segments of the population prior to the early 1780s. While this conclusion must remain tentative because of the small sample size of ceramics from 16JE198, an early 1780s introduction of creamware would be consistent with the apparent widespread popularity of the type at the time of its introduction and with the absence of earlier British types in southeastern Louisiana assemblages.

Mean Ceramic Dates (South 1977) were calculated for 16JE197, 16JE214, 16JE215, 16JE198, and 16JE216 in order to obtain additional chronological information on the occupations. South's original formula was modified only in that a median date of 1750 for faience was utilized in the calculations. The results, presented in Table 15, indicate some problems in the application of a formula based primarily on British ceramics to non-Anglo-American assemblages. First, the date of 1757.0 is clearly too early for 16JE198. The majority of ceramics used in the calculation were faience and brown faience, which have median dates of 1750 and 1755, respectively. Thus, even if the sample size was larger but of similar proportions, the resulting date would still have been too early.

By contrast, the dates from 16JE216 and 16JE215 may be somewhat too late. The preponderance of creamware (median date 1791) in these collections has skewed the results. Because coarse earthenwares have no established median dates, only the presence of faience and brown faience in the

Table 15. Mean Ceramic Dates for the Spanish Colonial Sites.

16JE197	1796.1	(n=80)
16JE214	1792.0	(n=42)
16JE215	1790.1	(n=24)
16JE198	1757.0	(n=8)
16JE216	1783.6	(n=110)

assemblages could reduce the mean dates from 1791. Faience represents only 9.1% and 3.1% of the collections from 16JE216 and 16JE215, respectively. It should be noted that the relatively small proportions of faience in these collections does not suggest that the sites are in fact later than previously suggested. Examination of collections from other southeastern Louisiana sites (Yakubik in prep) has demonstrated that when creamware finally appears in archaeological contexts, it appears in far greater quantities both in absolute numbers and types of vessels than had been the case with faience.

The mean dates of 1792 for 16JE214 and 1796.1 for 16JE197 may be fairly accurate. The dates for both collections are based on adequate samples, and both assemblages exhibit the least number of non-Anglo-American types. If these dates are accepted as the approximate midpoint of the occupations, then hypotheses concerning the dates of occupation may be developed.

It was suggested that 16JE214 was established after the original settlement of the Canary Islanders. If we accept the mean date of 1792 as the midpoint of occupation, and if this site was abandoned at the time of the 1802 crevasse, then the occupation was likely established in ca. 1782. This date is consistent with the results of the seriation and chi square, which suggest that the occupation was established later than the initial settlement of the colonists in 1779.

However, as suggested in the historic overview, 16JE214 might be Francisco Sanchez's holding. The site is located within the area hypothesized as being his property (Swanson, in press), and the assemblage contained later ceramics than were found at any site other than 16JE197. Documentary evidence indicates that Sanchez remained in Barataria after the 1802 crevasse. If this was in fact his house site, and if he stayed in Barataria at least until the death of Maria Olivares in 1807 (below), this would suggest that socioeconomic differences between the settlers were apparent by the nineteenth century. It would also suggest that the Mean Ceramic Date for the site is too early and was skewed by the presence of "older" ceramic types in the assemblage. Unfortunately, there is insufficient evidence to definitively place Sanchez at 16JE214.

It was suggested in above that 16JE197 was the residence of the Maria Olivares, and that the site was abandoned at her death in 1807. If we accept the mean date of 1796 as the midpoint of occupation, it suggests that the occupation was established in 1785. Again, this agrees with the interpretation that the site was established after the initial settlement of the Canary Islanders.

Artifact Patterning

Artifacts (excluding brick and materials recovered during wet screening) collected from 16JE197, 16JE214, 16JE215, 16JE198, and 16JE216 were separated into the functional categories (South 1977) of kitchenware, architecture, personal items, and armaments, and their percentages were calculated. As shown in Table 16, 16JE215 and 16JE198 had the highest percentages of kitchenware and the lowest percentages of architectural debris. By contrast, 16JE197 and 16JE216 had greater proportions of architectural debris and less kitchenware, and they were the only sites where armament category artifacts were recovered. 16JE214 had the highest percentage of architectural debris.

In order to compare the artifact class frequencies from 16JE197 and 16JE216, and from 16JE198 and 16JE215, chi square was calculated for both pairs. As shown in Table 17, the null hypothesis that there is no difference between the artifact class frequencies at 16JE197 and 16JE216 could not be rejected at the .05 level. Similarly, the null hypothesis that there is no difference between the artifact class frequencies at 16JE198 and 16JE215 also could not be rejected at the .05 level (Table 18).

To test whether the apparent differences between these two pairs of assemblages and the assemblage from 16JE214 are real or the result of sampling error, chi square was again calculated. As shown in Table 19, the null hypothesis that there are no differences in the artifact class frequencies of the two paired assemblages and 16JE214 was rejected at the .001 level. Thus, these differences are statistically significant.

It is suggested that these differences are the result of artifact distribution in different contexts at each of the sites. As noted in field investigations, above, the majority of artifacts from both 16JE197 and 16JE216 were recovered from what appeared to be adjacent, secondary

Table 16. Artifact Functional Class Percentages at the Spanish Colonial Sites.

	Kitchen	Architecture	Personal	Arms
16JE197	60.2%	31.3%	4.0%	4.5%
16JE214	53.4%	43.7%	2.9%	
16JE215	79.2%	17.0%	3.8%	
16JE198	77.3%	18.2%	4.5%	
16JE216	65.7%	28.6%	2.2%	3.5%

Table 17. Chi Square Comparing Kitchen and Architecture Class Frequencies from 16JE215 and 16JE198.

	Kitchen	Architecture	Total
16JE198	34 (34.3)	8 (7.7)	42
16JE215	42 (41.7)	9 (9.3)	51
Total	76	17	93

$X^2 = .027$

$X^2_{.05} = 3.84146$

Table 18. Chi Square Comparing Kitchen, Architecture, and Personal/Arms Class Frequencies from 16JE197 and 16JE216.

	Kitchen	Architecture	Pers/Arms	Total
16JE197	106 (112.7)	55 (51.8)	15 (11.6)	176
16JE216	264 (257.3)	115 (118.2)	23 (26.4)	402
Total	370	170	38	578

$X^2 = 2.319$

$X^2.05 = 5.99147$

Table 19. Chi Square Comparing Kitchen, Architecture, and Personal/Arms Class Frequencies from 16JE197 and 16JE216 (combined), 16JE215 and 16JE198 (combined), and 16JE214.

	Kitchen	Architecture	Pers/Arms	Total
16JE197 & 16JE216	370 (372.2)	170 (172.4)	38 (33.4)	578
16JE215 & 16JE198	76 (62.4)	17 (28.9)	4 (5.6)	97
16JE214	55 (66.3)	45 (30.7)	3 (6.0)	103
Total	501	232	45	778

$X^2 = 19.029$

$X^2.001 = 18.467$

middens. Thus, the greater proportion of architectural debris (specifically nails) might be expected if these refuse disposal areas were right next to the former dwelling. By contrast, artifacts from 16JE198 and 16JE215 were primarily collected from contexts that suggested random dispersal, and thus contained less architectural debris than would be expected adjacent to a structure. It is not surprising that 16JE214 had the highest percentage of architectural debris; the excavation unit at this site was located on a structural feature.

Life in the Settlement as Reflected in the Artifacts

The artifacts provide data on the daily lives of the colonists. The documentation states that they received a wide variety of provisions, and the material record indicates that they brought little or nothing with them from the Canary Islands. The ax heads (Figure 27) found at two of the sites resemble those of French or Spanish manufacture (Morrel 1965); these items were included on the provisions lists. The European ceramics were with few exceptions French or British, which is consistent with the ceramics available in the southeastern Louisiana at this date (Yakubik in prep). No diagnostic Spanish ceramics were recovered. Thus, although there is no record of the government supplying them with pottery, the Canarians apparently purchased or were given locally available ceramics.

The ceramics are consistent with relatively low status occupations. Only three of the faience sherds recovered were decorated. Similarly, only four sherds of decorated creamware were found. Two of these had annular decoration, which was a relatively inexpensive decorative type. The other two were hand-painted overglaze. While much of pearlware was decorated, these too included less expensive decorations such as annular banding, hand-painting, and shell-edging. Transfer-printing, the most expensive form of decoration (Miller 1980), was not seen on any of the ceramics.

There is evidence that the Canarians met some of their needs without government help. In the early years of the settlement, they obtained pottery and/or goods from the local Indians. They undoubtedly received flint from the government, but they apparently knapped it into usable gunflints

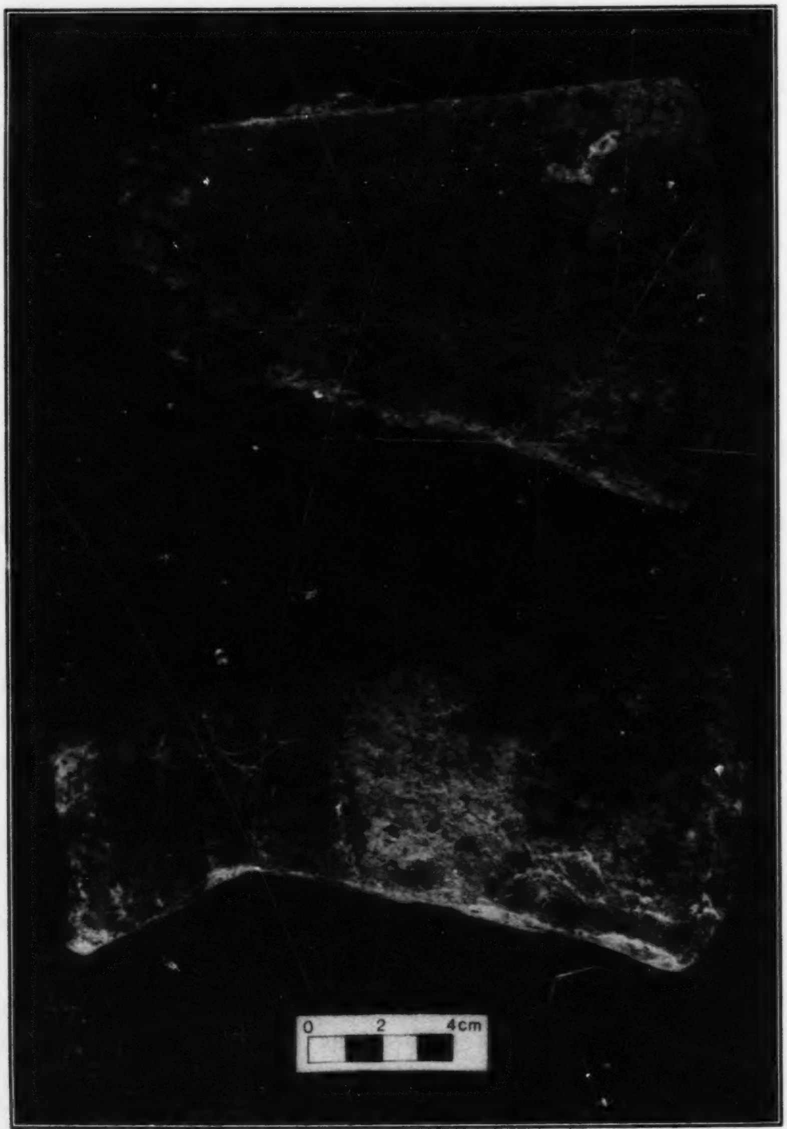


Figure 27. Ax heads from 16JE197, Shovel Test W5 (above) and 16JE214, Shovel Probe 6 (below).

themselves. Lead fragments suggest that they were manufacturing at least some of their ammunition. Shot found in the household middens likely derived from discarded portions of animal carcasses, indicating wild game was a component of their diets (Figure 28).

Organization of the Settlement

The documentary record and the general organization of the sites relative to the old Camino Real suggest that the majority of house mounds may have been constructed in a single effort at the time the settlement was established. However, the location of two sites (Potential Colonial Sites 8 and 9) between sites archaeologically investigated herein indicates that the original spacing between the sites is yet to be determined. Then to, sites found to date have only been located using compass and tape. Surveying is necessary to precisely locate the sites relative to one another.

The artifact assemblages indicate considerable movement of the colonists within the settlement, which attests to the hardships they suffered as a result of successive natural disasters. Differences in the collections from the individual sites provide evidence that some sites were occupied for only a brief period before their abandonment. At least one site, 16JE214, provides clear evidence of multiple construction episodes. As discussed above, the ceramic assemblages from three of the sites suggest that these occupations were established some time following the initial settlement of the Canarians. These occupations may have been located on previously abandoned, briefly occupied house mounds dating to the original establishment of the colony, but there is no clear archaeological evidence to support this. Even the hypothesized "earlier" (western) mound at 16JE214, cannot be confidently assigned to the initial 1779 settlement of the Canarians because of the lack of datable associated materials.

The fact that the sites provided little archaeological evidence concerning the original organization of the community in no way diminishes their importance. Five of the sites are in virtually pristine condition, and plowing at the sixth apparently has had little effect other than eradicating evidence of the eighteenth century cultural features. The sites, both together and individually, have provided a wealth of data on life in Louisiana's Spanish Colonial frontier.

RECOMMENDATIONS

It is recommended that 16JE197, 16JE214, 16JE215, 16JE198, 16JE199, and 16JE215 be nominated for inclusion on the National Register of Historic Places. The first five of these sites are in virtually pristine condition. The sixth has at least one area of preserved midden, and spatial patterning of artifacts can be observed despite the effects of nineteenth century plowing. Eighteenth century sites of this quality are rare in southeastern Louisiana, and the sites as a group provide a unique opportunity to investigate life in a Spanish Colonial Period settlement.

It is also recommended that archaeological testing be undertaken at the three newly identified sites to verify whether they are Canarian occupations. Testing should follow the methodolgy utilized at the six sites investigated to date in order to maximized comparability of the data. The sites should be protected until testing is undertaken. Similarly, particular care should be taken during future archaeological survey within the park to locate and identify any yet undiscovered Canary Islander sites.

Topics for future research at these sites have been presented in above. Of particular interest is the nature and extent of European-aboriginal trade. Then too, present investigations indicate a substantial amount of movement of settlers within the colony. Future research at these and at yet undiscovered sites may provide insights into the Canarians' adaptations to a hostile environment. One architectural feature has been identified; others are probably preserved. Further research may provide additional data on the structural improvements in the settlement. Similarly, intensive investigations at one or more sites may provide information on the spatial patterning of residences, outbuildings, activity areas, etc.

Sites have been located to date using compass and tape. It is recommended that these six sites as well as the newly identified potential sites be surveyed in to locate them more precisely. This will facilitate a more accurate assessment of the sites' spatial relationships to each other and to other preserved cultural features, such as the Camino Real. It will also permit issues regarding the original configuration of the settlement to be addressed with greater precision. Surveying should preferably be undertaken during winter in order to minimize impact to vegetation within the park.

The significance of these sites cannot be overemphasized. Care should be taken to protect them, and future research at the sites should be conducted within well-planned, problem-oriented research designs.

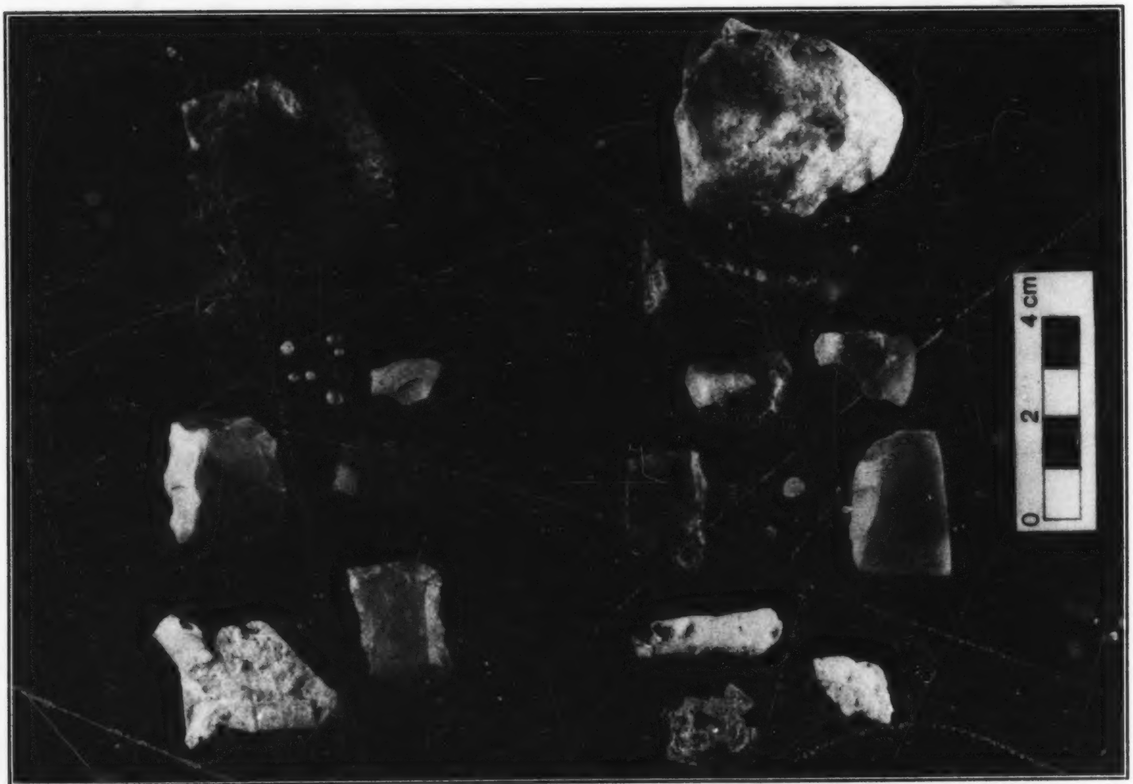


FIGURE 28. Gunflints, flint debitage, lead fragments and shot from 16JE197, EU2 (left) and 16JE216 EU1 and EU2 (right).

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